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THE

RICHMOND AND LOUISVILLE

MEDICAL JOURNAL.

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INDOCTI DISCANT ET AMENT MEMINISSE PERITI.

VOLUME XVII.

THE LARGEST MEDICAL MONTHLY IN AMERICA.

LOUISVILLE:

HULL & BROTHER, PRINTERS, FIFTH STREET,

1874.

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THE RICHMOND AND LOUISVILLE

MEDICAL JOURNAL.

VOL. XVII. JANUARY, 1874. No. 1.

ORIGINAL COMMUNICATIONS.

"Qui docet discit."

ART. I.—ON THE USE OF WARM WATER, AND ESPECIALLY BY SUBMERSION, IN SURGERY. By FRANK H. HAMILTON, A. M., M. D., LL. D., Professor of Practice of Surgery, with Operations and Clinical Surgery; Bellevue Hospital Medical College, New York.

The practice of using simple water, without medication, in the treatment of surgical accidents is not new. From time to time, dating from the earliest periods in the history of our Art, it has been in popular favor, and then again it has passed into relative discredit and disuse. Some years since, Alphonse Amussat, of Paris, attempted to draw the attention of the Profession to its merits by a very systematic and complete treatise, which he had the kindness to send to me, and which treatise I translated and published in successive numbers of the "Buffalo Medical Journal." The suggestions and experience of Amussat have ever since influenced considerably my own practice, but f the various modes of using water described by him, *irriga-*

tion seemed to me most available; and as to temperature, that most commonly employed by him—namely, about 60° Fahrenheit—seemed to me, theoretically, the best. I have, therefore, generally used cold-water irrigations. Late experience, however, has taught me that submersion is preferable, in many points of view, to irrigation, and that warm water gives better results in most cases than cold.

When, about one year since, I was appointed operating and consulting surgeon to St. Francis' Hospital, in this city, I found that my predecessors—Dr. H. Guleke and the intelligent visiting surgeon, Dr. Achilles Rose, with Drs. Tillman and Kammerer, visiting physicians and gynæcologists, all German physicians—were using water, and especially the bath, in the treatment of a large majority of the surgical accidents. They were following, in this regard, a revival of the practice in Germany. I listened to Dr. Rose's account of the results, and began to observe for myself; nor was I long in arriving at my present conclusions.

In order that you may follow the lessons as they have been studied by me and appreciate my convictions, I will make a simple narrative of events.

The cases will be drawn not alone from St. Francis' Hospital, but also from the Reception Hospital of the city, in which I occupy the position of surgeon-in-chief. They include nearly all the cases of importance which have been treated with water in these several institutions during my term of service. At Bellevue, also, I have employed warm water as a dressing in several cases, and with uniform good results.

CASE I—*Valgus of Great Toe—Excision of Joint.*—A laboring man, aged twenty-four, was admitted on account of valgus of the great toe of each foot and bunions. The deformity and suffering were such as to prevent him from walking. After consultation with Dr. Rose, it was decided to make a surgical operation. Accordingly on Monday, April 7, 1873, I exposed the bone opposite the metatarso-phalangeal articulation of the great toe on the right foot, and, disarticulation having been

effected, I removed three-quarters of an inch of the distal end of the metatarsal bone with the bone-cutter. The wound was quite large, and the incisions laid open the bottom of the foot, where inflammatory infiltrations are prone to occur and to do serious mischief.

No dressings were applied, and soon after the operation was complete, the foot was placed in the water-bath at a temperature of about 90° Fah. The bath was continued, with only occasional interruptions at night, fourteen days, and from this time, and whenever the foot was taken from the bath, the wound was kept wet with linen cloths saturated with water and overlaid with oil-silk. No attempt was ever made to draw the parts together, or to hasten the granulations by other means than the use of water. During the progress of the case it was observed that the foot became gradually œdematous, but the œdema was not accompanied with pain, tenderness, redness or other signs of inflammation. The œdema declined rapidly after removal from the bath, the toe gradually and spontaneously took its natural position, and at the end of four or five weeks the wound was closed, the toe still retaining the power of flexion and extension, and the deformity being entirely removed.

CASE II—*Same as Case* 1.—On the 2d of June, 1873, I operated in the same manner on the opposite foot. The details of the operation and the result are so nearly identical with those recorded in the first operation, that I will not repeat them.

CASE III.—*Same as Case* 1.—A few weeks later Dr. Achilles Rose made the same operation upon an adult male at St. Francis' Hospital. The treatment and results were essentially identical with those obtained in my own cases. There was little or no inflammatory reäction; and the toe finally assumed a position of perfect harmony with the other toes.

CASE IV—*Resection at the Elbow-joint.*—June 2, 1873, I made resection at the elbow-joint, at St. Francis' Hospital, in the case of a man aged forty, for caries of the olecranon and

ulceration of the articular surfaces of the joint. The arm was greatly swollen at the time of the operation, and pus was discharging at various points.

Two long and deep incisions were made at right angles with each other over the olecranon process; the joint was exposed, ulcerated and dripping with matter, and the olecranon process was removed at its base with the saw. The bleeding vessels having been secured, but no attempt having been made to close the wound, the arm was at once submerged in a bath of the temperature of about 90° Fah. Almost without interruption the limb remained in the bath during the next fourteen days; until about the tenth day œdema increased steadily along the arm and forearm, but at this time it began to abate, even before the limb was removed from the bath. Subsequently it was treated with water applied by means of folds of cotton cloth covered with oiled silk. The wound is now almost closed, and the limb is reduced to near its natural size. Flexion and extension are quite free through a space of eight or ten degrees, and motion is unaccompanied with pain.

From the day of the operation to the present moment there has been no sign of inflammatory reäction either in the limb itself or in the condition of the system. The patient has eaten and slept well all the time.

CASE V—*Lacerated Wound.*—On the 30th of June, 1873, James Austin, aged eleven, was admitted to the Twenty-second Street Reception Hospital, his leg having been caught between a street car and a loaded wagon while both were approaching each other rapidly. The soft parts above the heel were torn away extensively, making a wound nearly large enough to receive the hand; the tendo-Achilles was gone, the muscles behind the malleolus internus were severed or crushed, the posterior tibial artery was divided, the malleolus externus broken, and the tibio-tarsal articulation completely exposed.

I decided not to amputate, but the boy being exceedingly restless and impatient of treatment, it was thought impracticable to use the bath. Having therefore tied the posterior

tibial artery, the limb was laid upon a pillow covered with oil-cloth, and completely enveloped with two thicknesses of sheet-lint previously saturated with tepid water, and then enclosed with oil-silk. Great care was taken to cover the toes, foot and leg completely with these water dressings. Essentially this plan of treatment was continued until the wound was closed. On the thirtieth day after the injury a special note of the condition of the limb was made. The foot was œdematous below the wound; but there was no œdema or swelling from any other cause in the leg above the wound. The patient was quiet, the wound suppurating and granulating finely, but the joint surface remained completely open, and could be seen free from vascularity or other signs of inflammation.

September 29th he left the hospital with the wounds entirely closed.

CASE VI—*Lacerated and Contused Wound of Foot.*—July 29, 1873, Patrick Evers, aged thirty, was received at the Park Reception Hospital, having a few hours before been injured by a locomotive on the New Jersey Central Railroad. The right foot was crushed, and the bones more or less broken nearly in a line with the metatarso-phalangeal articulation. To be more precise, for this is a most extraordinary case in regard to results, the little toe was cut nearly off and broken, the fourth metatarsal bone was comminuted, the first phalanx of the great toe was broken, the integument over the joints was discolored, somewhat torn and swollen, and the bottom of the foot, at a corresponding point, was extensively lacerated. The man had been drinking heavily, and was not yet sober, but he complained greatly when the foot was handled.

Being called in consultation, I said to Dr. Henry, the hospital surgeon, whose opinions always commanded my respect, "What do you think; can we save the foot?" To which he replied, "In every case similar to this in which an attempt has been made to save the limb, the patient has died." I added, "and my experience has been the same, but I have never seen the trial made by submersion, and I have great faith, from my

late experience, that it would succeed." It was decided to try this method. I therefore ordered a bath from Otto & Reynders, and the limb was submerged in water at a temperature of about 100° Fahrenheit. He soon complained of this as being too warm, and as causing a burning pain which extended up to the knee. By the addition of ice the temperature was lowered to about 90°. The thermometer was not used, and I can not therefore be more precise in my statement.

On the 31st of July I found the foot considerably swollen, but not painful. He was resting quietly. Five days later I discovered that the gangrene was extending along the top of the foot and beyond the parts originally injured. The circumstance was unfavorable, and I began to fear that we had made a mistake in attempting to save the foot; but placing my hand in the water, I found that it felt cool, and it was at once suggested that the low temperature of the water was the probable cause of the mischief. The orderly admitted that he had neglected to attend to this latterly with as much diligence as at first. Hot water was introduced and the temperature again elevated to about 90°. Two days later the gangrene was arrested, and the line of demarcation had begun to be formed. On the sixteenth day the foot was removed from the bath; and from this time, until he left the hospital, it was treated with water fomentations alone. Shortly after its removal from the bath a small abscess formed in the sole of the foot, which, being opened, soon healed. It is quite probable that if it had been kept submerged longer this would not have happened.

September 10th, less than six weeks after the accident, he was sent to Bellevue, as a convalescent, with the foot nearly healed, and with the loss of only three toes.

CASE VII—*Necrosis of the Humerus.*—July 21, 1873, ——, aged forty, was received at St. Francis' Hospital; I made an incision five inches in length upon the front of the arm a little below its middle, exposing the bone, and, with the aid of the trephine and gouge, removed several large central sequestra. The position of the wound rendered it difficult, although not

impossible, to use the bath. It was therefore covered with folds of cotton cloth saturated with water, only a pledget of loose lint being laid in the chasm caused by the removal of the bone. The whole was surrounded with silk, and the limb laid upon a pillow.

July 31*st.*—No reäction nor swelling had occurred, and the wound was granulating finely.

September 5*th.*—Wound not yet closed, but slowly closing. Water dressings are still continued.

CASE VIII—*Lacerated Wound and Fracture of Leg.*—Jacob Habers, aged twenty-five, was run over by a street car August 9, 1873, breaking the fibula of the right leg and causing an extensive laceration of the soft tissues. During the third or fourth day succeeding the accident, the lacerated wounds were dressed with oakum bound upon the limb with a roller. August 13th he was received at St. Francis' Hospital, the whole thigh and leg being greatly swollen, and his general condition exceedingly feeble. At a consultation, it was decided that neither the state of his limb nor of his general system would warrant amputation, but that his chance of recovery without amputation was small. Water fomentations were at once applied, as he was too feeble and the leg too much swollen to admit of the use of the bath. These were continued two weeks, when the bath was substituted; the bath being employed, with only occasional interruptions, during the next five weeks. He then returned to the fomentations.

October 1*st.*—The wound is nearly healed, and the patient is completely restored in health.

November 1*st.*—Wound closed.

CASE IX.—*Lacerated and Contused Wound of Foot, with Fracture.*—Richard Shay, aged forty, admitted to Ninety-ninth Street Reception Hospital September 17, 1873, having just received a severe injury of the left foot caused by the fall of a heavy stone upon it. The first and second toes, including the lower portions of the corresponding metatarsal bones, were

crushed and broken. The other toes, with considerable portions of the top and sides of the foot, were badly bruised. I did not see him until the third day, at which time the condition was such as ordinarily has been thought by me to demand amputation, since the attempt to save the limb under the same circumstances has generally resulted in death.

The limb was at once submerged in water at the temperature of 90° Fahrenheit. No other dressings employed.

September 30th.—Found patient with foot still in the bath. Great toe and the adjoining toe sloughing off. No extension of gangrene beyond this. Limb very œdematous as high as the tubercle of the tibia. Very little pain or tenderness. No febrile disturbance. Sleeps well. I directed a teaspoonful of common salt to be added to the water every two or four hours, or as often as the hot water is added. I did this at the suggestion of Dr. Rose, hoping to contract the tissues and diminish the œdema.

October 2d.—Œdema not diminished. Patient feels well, and everything appearing favorable, so far as the foot is concerned, it is removed from the water and dressed with water fomentations.

November 1.—Wound closed and patient discharged.

CASE X—*Comminuted Fracture of Leg followed by Traumatic Gangrene—Amputation.*—(I have not obtained full notes of this case, nor is the treatment terminated; but as it presents a new point of interest in relation to the water treatment, I shall make a brief report of it.)

A German, about thirty years of age, of temperate habits, was run over by a street car October 24th, the wheel traversing the left leg a little above the ankle. When admitted to the Ninety-ninth Street Reception Hospital soon after the accident, it was ascertained by Dr. Delgado, our experienced House Surgeon, that the tibia and fibula were broken and comminuted, and believing that it required amputation, a message was sent to me. Through some inadvertence the message did not reach me until night, probably eighteen hours after the injury was

received. When I arrived, the gas had given out, and the amputation was deferred until morning. My second visit was made nearly thirty-six hours after the receipt of the injury, and it was then apparent the favorable period for amputation had passed. The leg was swollen, red and tender as high up as the knee. The intermediate period or period of inflammation had fairly set in, and it was believed that we should give him the best chance for life by delay, or by tiding him over into the "secondary" period or period of suppuration. There were several reasons which controlled this decision. First, the fact that operations in the period of inflammation are generally fatal. Second, sensation in the foot and toes was only a little less than natural; the integument was nowhere broken, and there seemed to be some small ground of hope that the foot might be saved. Third, I had great confidence in the power of warm water to control inflammation and limit gangrene.

The limb was too much broken to admit of submersion; it was therefore laid upon a pillow, covered with oil-cloth, and cloths saturated with *hot* water were applied to the entire foot and leg. These were enclosed in cotton batting, and the cloths and hot water were directed to be renewed every hour. The directions were carried out fully, but the vitality of the foot gradually diminished, and gangrene set in fairly by the second or third day. No change was made in the treatment, and on the ninth day after the injury (last Sunday) the gangrene had implicated all the parts originally injured by the wheel of the car, and the foot was insensible; but there was no extension of gangrene above the line travesed by the wheel; the inflammation and swelling had entirely disappeared, and a complete line of demarcation was formed, by suppuration, between the living and the dead tissue. The patient's pulse was slow and soft, but he suffered considerable pain in the limb, and was desirous that it should be amputated. The period seemed favorable, and I amputated about five inches below the knee. Incidentally I will say that the amputation was made according to the plan recently suggested and practiced by Esmarch, binding the limb

firmly from the toe up with a roller and without a tourniquet. The amount of blood lost was less than I have ever seen in an amputation at the same point.

Remarks.—The most reliable effects seem to have been obtained from complête submersion; but water "fomentations" appear to be only second in value to "submersion," and both are, in most cases, superior to "irrigation," in just so far as by the latter method it is found difficult or impossible to enclose the limb completely with water of a uniform and somewhat elevated temperature. When the baths (submersion) are employed the cuticle soon becomes white, in consequence of being sodden with water; and in most cases the limb becomes œdematous. When wet cloths alone are employed (fomentations) the cuticle softens also and becomes white, but the limb is not disposed so much to œdema; that is to say, saturation of the tissues or the endosmosis of water is not so complete. When irrigations are used, in most cases, I observe that the cuticle is only softened here and there, and there is no tendency to œdema, but inflammatory reäctions are more apt to occur and continue.

In no case which has come under my notice, when the baths or fomentations have been employed, has there been acute phlegmonous inflammation, or has gangrene extended beyond the parts primarily destroyed, or has pyæmia or septicæmia occurred. Nor have deposits of pus been found, or burrowing sinuses, except in the single case reported, when an abscess formed in the bottom of the foot after its removal from the bath.

When it is remembered that these results have been obtained at St. Francis' Hospital not alone in the cases above enumerated, but also in a large number of other examples of recent injuries and surgical operations of minor importance, it must be admitted that the results are universal, and that they ought to be accepted as very conclusive testimony in favor of the practice.

I desire to place especial emphasis upon the fact that these

results have been obtained, first and chiefly by submersion, second by fomentations, and in nearly all cases by *warm* water, or by water at a temperature of from 90° to 98°. The conclusions reached by Amussat, that water at a temperature of 60° Fahrenheit is most generally useful, is not sustained by our experience. In a few instances we have used cold water at first and for a few hours to restrain parenchymatous hæmorrhages, but in all the cases noted by me the temperature has subsequently been raised to 90° or 100°, and maintained at that point so long as they were immersed. Attention is called again to the case (VI.) in which, the temperature being lowered to 60° or thereabouts, gangrene occurred, but was speedily arrested by elevation of the temperature to 90° or more.

ART. II.—MALARIAL FEVER. By B. F. HART, M. D., Dallas, Texas. [Read before the Dallas City Medical Society.]

In the discharge of a duty imposed, a review of some points, considered by two previous essayists on Malarial Fever, is proposed for this occasion, even at the risk of trying your patience. But not having taxed your time in the past, the hope is entertained that you will the more readily indulge these random thoughts on a subject that, to your thinking, may have been sufficiently exhausted. Notes were not taken at the time, and memory being imperfect, much that was said can not now be recalled.

Typho-malarial fever was defined by several gentlemen to be a typhoid condition of malarial fever. With becoming respect, it is suggested that such a definition is at variance with acknowledged authority. In his work on "Diseases of the Mississippi Valley," my honored preceptor, Dr. Daniel Drake, recognizes a mixed fever under the head of "Remitto-Typhus." A hybrid fever, resulting from the action on the system at the same time of the special causes of typhoid and malarial

fevers, has been recognized and ably defended by Professors Dickson and Flint, both of whom have had the best opportunity of investigating the subject. But to Dr. J. J. Woodward belongs the due of proposing Typho-malarial as the name which was adopted by the Army Board in 1862. In an article by Woodward, in 1863, on "Chief Camp Diseases U. S. Army," it first appears in medical literature. Sometimes it was called Chickahominy Fever, and at other times Camp Fever. A malarial cause in the disease was shown by its symptoms and a respondence to a certain medication; symptoms during life, and after death, characteristic post-mortem revelations, plainly proved a typhoid cause had done its work.

But surely there is nothing more inconsistent in the active coëxistence of the special causes of these two fevers than in that of other diseases. Murchison, Ring, Marson and others, have shown conclusively that variola, scarlatina, rubeola and whooping-cough, two or more, may and do coëxist. Thus the dogma of Hunter, that "two fevers can not exist in the same constitution, nor two local diseases in the same part at the same time," must yield, like a great many other "truisms" of the "Fathers," to the advancing march of scientific investigation.

Much was said as to the all-sufficiency of quinine and the wonderfully detrimental properties of calomel in the treatment of malarial fever. Truth is found in medio, it is believed, in this matter, as in all other affairs of life.

Since the able advocacy, in 1859, of quinine medication alone, in all forms of malarial fever, by Dr. Brown, of Texas, Dr. Thompson and Prof. Bowling, of Tennessee, and others, the Profession have been gradually drifting in that direction. But it does not follow, nor is it a fact, that calomel and other medical agents may not occasionally be of much service as auxiliaries. Not that the liver is more diseased or more troublesome than other organs, and should therefore be subject to a scourge, as in the days of Cook, when it suffered a more relentless persecution than all the organs in the body together, and calomel was more abused by far than any article known to the

materia medica. Yet there are often indications to be met in the treatment outside of counteracting the special cause in which calomel, in small doses, quickly carried from the system, may not be used to much advantage, and with entire safety. Much is said about the baneful effects of calomel in this disease, the evidence, however, going to establish the fact is entirely wanting; and it does not subserve the purpose of science to read out of the list so valuable an article in a disease so wholly sthenic in type simply to satisfy the proscriptive demands of a few who, in all probability, have gone too far to the other extreme.

The human mind is so constituted, that with a large majority of the race it is quite difficult to leave one extreme without, pendulum-like, going to the other.

While holding that the immoderate and long-continued use of calomel has done and is now doing much harm; and further, that even a limited use in adynamic types of disease is very prejudicial, yet it is contended that no amount of misuse or abuse can invalidate its medical virtues in some diseases and certain conditions of the system. That Hughes Bennett's experiments showing the non-action of mercury on the liver were not conclusive, has been affirmed by Dr. Fraser, of Edinburgh, and much argument adduced to sustain his position.

Not later than last March, Stricker and Röhrig presented to a meeting, in Germany, experiments on this point made by them, proving beyond a reasonable doubt that an increased flow of the biliary secretion is due to the action of this agent.

To hear at this stage in the study of malarial fever that quinine acts on the *homœopathic** principle in affording relief, is sufficiently astounding, surely.

Standing on the outlook of conservative and progressive medicine for nearly a quarter of a century, resolving in the beginning to know no theory or practice unless in accordance with common sense and sound philosophical principle; to accept

* It was so affirmed in an essay, and that he has produced chills, and Hahnemann eulogized.

no dogmatical assertions or broken-down hobbies at the hands of any "Father," however hoary or much deserving; to prove all things, so far as possible, and hold fast to that which is good; it has ever been with a high degree of satisfaction that false facts as well as true have been brought in review, and their merits considered in the light of important thought. And it is here confessed that this homœopathic idea, whether considered as a matter of theory or fact, is more difficult to square to any known rule of thought than all else together; in fact, all efforts to read it in the light of logic, reason, or common sense, have utterly failed. The thought is incomprehensible, and would not, save out of respect for its growing proportions, deserve even a passing notice. Hahnemann was not satisfied with a partial divergence from the true path of physic. Not he. Others had already traveled *that road.* To subserve his purpose, the tables must be completely turned—a radical change effected; so radical that all might read who run. A divergence so great as to be antipodal only, would meet the case; and hence he promulgated the startling thought of "similia similibus curantur"—like cures like. A theory up to this time unheard of, the medical mind ever having been a unit on the opposite idea. On this one thought Hahnemann erected his grand superstructure. It is true another thought, "the greater the dilution the more potent the medicine," noted for nothing but its absurdity, was drawn out of the first by the force of his reasonings; for, foreseeing that the disease and his medicine coïnciding in their action must necessarily be fatal, the infinitessimal plan was seized upon to let him out of the dilemma. By reducing medicines to a *name* merely, the difficulty was obviated, the confidence of his thoughtless followers retained, and the system, false and delusive as it was, grew and continues to flourish to the present day, ever feeding on the prejudices and easy credulity of unreasoning humanity.

But has the system as a practice been powerless for good? This is not asserted. On the contrary, it is affirmed that much good has resulted indirectly from this practice; not because it

embodied any truths in medicine, or effected any cures by potencies administered. Under this treatment, however, a large majority of homœopathic patients were speedily restored to health. The people were specially interested in a restoration of health; and when it could be effected by these beautiful little pellets, so pleasant and withal so harmless, in contrast with loss of blood to fainting, mercurialization to loss of teeth, and shattered constitution, tartarization to the point of turning inside out, to say nothing of endless purgation to effect a cure, it fails to be so much a wonder that thoughtless persons should be inveigled into this net so artfully woven. What thought the doctors, small and great, of this wonderful revolution? As cures evidently could not be the result of medicine, they were forced to recognize in homœopathic potencies the great *restorative* law of nature—the "vis medicatrix naturæ"—the power of *nature* to cure.

An appeal has been made to this all-pervading law of animated existence, and prompt response was given quite equal, to say the least, to the boasted power of the lancet, tartar, and calomel combined. To the shame of the Profession and great detriment of the public, this recuperative law, ever active in the renewal of life by repairing the waste places, had been in the past almost wholly ignored. In blind confidence they placed their trust in medicines and sought by heroic treatment to effect cures with little regard for the efforts of nature. The lesson taught, that medicine should second the "vis medicatrix naturæ," instead of overriding or setting it aside, was most valuable indeed; and since that time medical science has been conservative and progressive. The shackles, binding with dread and awe to dogmatisms that had no claims to favor other than the weight of ages, were broken and unfettered; independent thought has probed the mysteries of nature with a success of which the most sanguine had never dreamed.

Thus are the Medical Profession of to-day indirectly indebted to Hahnemannism, a system founded on the *pretended fact* that cinchona, given in ordinary doses to healthy subjects, produces

intermittent fever; and as this article was known to arrest or cure that disease when caused otherwise, the way to the "similia similibus" doctrine was plain and easy.

Is it a *fact* that cinchona salts cause malarial fever? *Most assuredly not;* for it is in direct conflict with the observation of the whole Medical Profession up to the present time. Of the ten thousand ounces and more of quinine that have been used in the last few years, even as a prophylactic and general toner of the system, who ever heard of *such a result?* Does not every physician find it in conflict with his every-day experience? But even should such a result follow its use once in a thousand or so times, no general universal law could be founded on a fact that, instead of being the *rule,* is so very exceptional as to be observed but in the fewest instances, and those most probably delusive, resulting from anxiety in a nervous patient about the experiment, or else a coïncident action of malarial cause. Certainly, no use of the medicine, either accidental or intentional, has ever found a recorder of such effect in medical literature. On the contrary, Dr. Elston has submitted various experiments on different healthy subjects, in none of whom were any such symptoms shown. To one case he administered twenty-grain doses every half hour till ten doses had been taken, resulting in three beats more of the pulse to the minute with increased fullness. Dr. Traussig, of Rome, relates the case of a soldier of small size, stout constitution, age thirty years, named Albitz, who took by mistake one ounce of quinine, and, except complete deafness and a kind of stupor, no other bad effects ensued, and no antidote was administered. This certainly was enough to have produced a series of chills; nothing of the kind, however, followed.

What folly to talk of "like curing like," when the daily experience and observation of every physician in the land is directly the reverse. Who gives an alkali to neutralize an alkali? An acid to counteract an acid? A non-diaphoretic or diuretic medicament to restore suspended tegumentary or urinary secretions? A depletent to reänimate the flagging pow-

ers of life? A stimulant to strike a balance in phlogistic excitement? A sedative to counteract the wonderful depression in venomous poisoning?

On the contrary, has it not *ever been*, and does not common sense teach it *ever will be*, exactly the reverse? With no wish to be offensive or to disrespect the conviction of others, it is averred, that viewed from whatever standpoint, this "like cures like" idea appears, of all absurdities, to be the most supremely absurd.

Then how *does* quinine act in the cure of malarial fever? To the better understanding of the subject, the cause will be first considered, and then the remedy for its removal.

One of the essayists defined malarial fever cause as some undefined something of which nothing was known. The other as a similar something resulting in some mysterious way from the action on each other of the four elements of the ancients, which seems not to differ from "solar heat, moisture and vegetable decomposition," as taught by routine for so many years of the past.

Now, it is herein *affirmed* that the cause is a *well-defined, tangible reality*, the *proof* of which is plain beyond the shadow of a doubt; and in the production of that cause the decomposition of vegetable matter forms no part or parcel. By the rigid clinical and post-mortem investigations of Zeuker in 1860, the cause of a disease which had existed perhaps from the time our ancestors first transgressed the positive command of God and indulged in swine flesh, was brought to light in the form of the trichina spiralis. Previous to that the disease even had no certain name, being called gastro-intestinal flux, rheumatism or typhoid fever, as certain symptoms might predominate in each particular case. Now the disease and its cause are as well understood as any in the catalogue. So up to 1864 the cause of Malarial Fever was a hypothetical idea; but then it was that Salisbury shed a light on the subject as brilliant as it was true. This indefatigable investigator established by his experiments the fact, that the spores or germinal principle of palmella, a

species of cryptogam, were the *real* cause of the fever. To satisfy his mind on this point, a great many experiments were made at different places and under quite different circumstances. These plants are red, pink, green or white, according as they grow on calcareous or non-calcareous soil; those of dark colors proving to be most poisonous. By microscopic power the germs were detected in the urine, spittle and other secretions of the body on which the disease was actively operating. The spores were collected on the under surface of a glass plate suspended near the ground in locations where the cause was believed to exist; at first no spores were collected, because the glass was not over the cryptogam; but success finally attended the effort, and the spores were traced to the palmella, one of the lowest orders of vegetation, and proved to be its germinal principle. The plant is found growing in damp, peaty or boggy soil, and sometimes in soil recently unearthed that is adapted to its wants; and, like other plants, luxuriates and is most prolific where circumstances most favor its development. Wherever it was found growing, malarial fever was also found hard by, if the locality was inhabited; and this observation was always the same, whether in Ohio, Kentucky, Tennessee, Indiana, or elsewhere. On the other hand, where there was no trace of this plant to be found, a case of malarial fever was *never* discovered, unless caused by previous visit to a malarial district. The spores rise mostly during the night-time, with the heavy damp vapors, to a height of from thirty-five to one hundred feet, and rest on a level with the fog strata, being more numerous as that altitude is approached; and hence explained by the well-known though heretofore unaccountable fact, that abrupt hill-side ranges, not considered malarial soil, are sometimes, especially when to the leeward, quite as sickly as the swampy bottoms adjacent.

The vapors being dissipated by the morning sun, the spores settle back to the earth, which corresponds to the observation, that people living in such districts are much more exempt when they remain in doors till after the sun has risen. It is during

the night and early morning that the spores enter the blood through the lungs. It was clearly shown in many instances that persons living in the second story, just above the fog-line, were exempt, while those below, on the first floor, were continually sick.

During these investigations, running through several years, the fever was found in several localities where it had never been known to prevail before, and was altogether unaccountable till explained by the growth in the immediate vicinity of this cryptogam; it being brought into existence, in every instance, by circumstances favoring its growth, such as the drying up of pools and ponds in the damp, peaty mud, of which the plant finds acceptable conditions for its home; in other cases the soil adapted to its growth had been exposed in ditching, making canals, or other excavations in the way of improvement; and again, by the deposit of such earth in the immediate vicinity of those suffering the consequences. This accords with the history of Dr. Effinger's cases near Columbus, Ohio; of the sick in Hon. John Brasee's family near Lancaster, Ohio; of the sick in the family of Theodore Talmadge, of College Hill malarial trouble, Nashville, Tennessee, during the war; and hundreds of other cases where the disease was seen in unusual localities; but in *every* instance, without a solitary exception, the palmellæ, with its attending circumstances, as noted above, were in *immediate proximity*.

To demonstrate still stronger this truth and make assurance doubly sure, the earth on which the plant was growing was put in tin boxes and carried to high, healthy land, far removed from malaria, and where it had never prevailed, placed on the window-sill of the sleeping apartment of healthy young men, and the consequence was, in a few days, malarial fever. Various repetitions on different subjects resulted in the same thing. In no case were the spores *ever found* in the secretions of those who *had not* been exposed to malarial influences. In substantiation of the foregoing truth, observations somewhat similar and of like purport in a number of cases have been made and

reported by Dr. Edgar Holden, U. S. N.; by Dr. Bolestria, of Rome, Italy; by Dr. Schmidt, of the Mauritius, noticing among other things "the great amount of spores in the secretions of all persons with the fever"; by Surgeon Hugh H. Massey, of Jaffria, using the language, that "*intensity* of intermittent fever *coincided* in point of time with *unusual large quantities* of spores in the atmosphere."

Does it not appear that proof sufficient has been adduced to point out clearly and unmistakably the *true cause* of malarial fever? And it must be recollected in this connection that this is no theorizing, but dealing simply with hard, stubborn facts.

Truth has ever found it difficult to prevail against error and prejudice; it was so in the days of Galileo, Newton, Jenner; and to-day, in the great emporium of the world (London) exist anti-vaccinating societies; and only last year a report was made to the Medical Society in St. Louis in which it was declared that vaccination was not only a failure, but actually a most pernicious and diabolical invention, which should be stayed by the strong arm of the law, or words of similar purport. But vaccination still lives, and so does progressive medicine.

Having shown the cause, the manner in which it acts in producing disease will be next considered. Reasoning from analogy and the well-known action of medical agents which bring relief to patients suffering from malarial poisoning, the conclusion seems to be inevitable that a zymosis or fermentive state is established in the body, producing the symptoms denominated malarial fever, the sweating stage of which is a powerful, though generally futile effort of nature to rid itself of the poison. The condition of the blood, as shown by examination in health and disease, *proves* this to be the case. Fresh drawn healthy blood will not cause sugar, urea, amigdaline, nor asparagin to ferment; but if exposed from six to fifteen days, all will ferment except amigdaline, no length of time will produce a change in it. Opposed to this, blood drawn from the vein of a person sick with a zymotic disease, induces fermentation in

every one of these articles in a *few* hours, clearly showing the fermentive state *must have existed* in the blood while yet in course of circulation. The blood acts, or rather that which is in it, as the fermentive element in these cases. Experiments made by Prof. Polli and others prove that the blood does thus act in health and disease.

The process of leavening or fermentation, as is well known, is but the increase by multiplication of the vegetable leaven or ferment in an element suited to its growth, the chemical changes produced being in some way connected with its secretions.

But fermentive plants are unlike, and hence produce acetic, vinous, lactic fermentations; so the causes being unlike, zymotic affections of typhoid fever, measles, small-pox, intermittent fever, and the whole class, follow as a necessary consequence. A small particle of yeast, in a manner at first quite imperceptible, gradually by multiplication affects the whole mass. So the incubative stage of certain diseases, quite unnoticed at first, gradually multiplies; the cause becoming constantly more impressive, till finally there is open rebellion of the vital forces in what are called the various zymotic diseases. For example, look at the result of inoculation of the merest particle of small-pox virus; of the introduction of a few trichinæ spiralis into the stomach; of the effects after incubation of the merest speck of hydrophobic virus; and, to make it plainer, the full-blown case of itch, by multiplication, from one insignificant acarus; the latter, however, not producing a zymosis, because its field of operation is in an external and comparatively unimportant organ; besides, the morbid action is plain to be seen, and is soon arrested by the application an of anti-zymotic medicine. *Think of it*, was there *ever* analogy so striking?

To further prove that malarial fever is without doubt the result of fermentive action of palmelic spores, or in other words, their multiplication in the system, it will be shown that *all articles* that *have arrested the fever* are recognized *anti-ferments*,

possessing in various degrees this property. While quinine is recognized as a tonic, it is through its anti-fermentive properties that relief comes, and in this way only, except in so far as it may tone up and benefit health, as in other diseases.

The analogy between the action of the causes of disease and fermentation has been shown in the strongest light. It is an admitted fact, that in all cases not of long standing, quinine will arrest the fever; but *quinine will also arrest fermentation*, and that most effectively. Prof. Brinz, of Bonn, has tested this property of quinine in a great many instances, and concluded in this language: "That quinine has the power of arresting the process of putrefaction and fermentation in a high degree, and that it is active poison for all low organisms, animal and vegetable." Dr. Grace Calvert has announced "that quinine has the power to prevent fermentation or the development of fungi" without knowing, it would seem, of the previous publication of Brinz. Dr. R. Giesler, of England, declares "that quinine is a superior antiseptic, exciting a preservative property on fresh meat greater than many other substances," and hence was led to adopt its use in various wounds, foul and gangrenous ulcers, with the most happy results. He used it also in plastic operations with good effect. Quinine, then, cures malarial fever by arresting the fermentive action of the spores and causing, perhaps, partial destruction of the same, thereby enabling the system, through its eliminative functions, to remove the cause when health returns, sooner or later, depending on the amount of damage sustained by the cause. Is not this plain, common sense philosophical reasoning from cause to effect? As quinine exerts maximum action in about nine hours, it is evident a large dose should be given that long before the expected chill; and in cases of urgency, when not tolerated by the stomach, the hypodermic mode has acted speedily and well, with much economy in its use. Acting as an antiseptic, it would naturally be expected to exert a preservative action against the spores, which is, indeed, the fact; for it has been used as a prophylactic for several years, giving complete satisfaction. Cinchona

and all its salts cure the chills; but they, too, arrest fermentation.

Again, is not arsenic one of the best anti-periodics? curing often the most inveterate cases of malarial fever. Yet, is not it also a prime antiseptic or anti-ferment? What say Emi and other chemists: "That under the microscope the rapid stoppage of the vitality of the yeast plant is observed when arsenic is added to the fermenting liquor." In Cornwall, England, arsenical fumes from the furnace protected potatoes from disease that blighted them in other sections. Dr. Robinson says, "that in different parts of the world and among different people, arsenic has long been regarded and used as a preservative against atmospheric and other poisons." And more recently it is stated on good authority that the arsenic-eaters of Styria are peculiarly exempt from fever and epidemic diseases.

The sulphites and hyposulphites of soda, potassa, magnesia, and lime, cure malarial fever as certainly as quinine. Prof. Polli, of Milan, who has used them many years, says they do not act quite so speedily, but much more certainly in preventing a return. In one report of 403 cases treated by sulphites, only 5½ per cent. relapsed; whereas, of 183 treated by quinine, 44½ per cent. relapsed. Drs. Leavitt, North, Baxter, Hampstead, Turner, and scores of others, have made the most favorable reports on the use of these salts in thousands of cases, in many of which cures were effected when quinine had failed.

But are not the sulphites, acting through the sulphurous acid in them, the very best antiseptics or anti-ferments known? So say Polli, Robinson, and a host of other investigators. The morbid fermentive process that takes place in the stomach, in which there is a minute organism developed, known as "sarcini ventriculi," is completely controlled and stopped by the use of sulphites. Sulphur destroys the fungus disease of the grape, and so it does the itch. Sulphurous acid arrests fermentation instantly, and no agent is known equal to it in disinfecting small-pox and cholera habitations. In the language of Polli, the "sulphites possess, in a supreme degree, the power of arresting all known organic fermentations and putrefactive met-

amorphoses of animal solids and liquids." Cider is kept sweet for months by the addition of a little sulphite of soda to prevent fermentation; the same article will arrest, as if by magic, the parasitic development in sycosis menti. The bisulphites are good anti-periodics, but they too arrest fermentation. The comp. solut. iodine has proven to be an excellent anti-periodic, relieving many cases where quinine had failed. In iodine, also, is found one of the best anti-ferments or disinfectants, so says the distinguished Dr. Richardson, of London. Dr. Treulich reports great success in the treatment of malarial fever with carbolic acid. Cases with enlarged spleen, defying ordinary treatment, yielded readily to its use. The destructive action of carbolic acid in fermentive and putrefactive processes are too well recognized to require more than a mention. Chloride of sodium cures the great majority of cases. Its antiseptic properties are familiar to all; it is destructive, too, to lower orders of life, and doubtless performs no insignificant part in preserving the body continually from disease. Several of the iron preparations have proven to be good anti-periodics; but are not some of them disinfectants in a high degree? Picric acid and its salts arrest and cure intermittent fever, but they, too, are anti-ferments. Nitric acid, Cayenne pepper, piperine, alcoholic liquors, have all made some good cures; but are not they, too, like *all the rest,* antiseptic and destructive to lower organizations? And it may be herein *confidently* stated that no curative agent in malarial fever *has or ever will be found* that does not possess antiseptic properties in a greater or less degree; for it is through this property alone that the cause can be reached.

Anti-ferments, antiseptics, and disinfectants, are terms used to convey the same thought—destruction to and protection from infusorial and cryptogamic life; differing in degree, however, from mild articles to those too active to introduce into the stomach. An effort has been made at some length to prove to a demonstration three propositions:

1. That the cause of malarial fever is, in truth, the spores of palmella cryptogam.

2. That they act as ferments, which is shown by blood in disease, by analogy, and by the known properties of agents that afford relief.

3. That the disease can be arrested and restoration to health effected through *none* other than antiseptic remedies.

And the result has been to deepen and strengthen the conviction of the truth of these propositions.

Further, when consideration is taken of the vast amount of light shed by Pasteur, Trousseau, Tyndall, and others, co-laborers on infusorial and cryptogamic life ever existing in the atmosphere that is constantly brought in contact with the blood, and the liquid and food that is taken into the stomach, the dim, misty darkness through which the cause of disease in the past has been seen, seems to be rapidly passing away; a wide field of operation opening up to view in which progressive medicine may ever find something to do in the further development of that great source of trouble in the past—the etiology of disease. By the lights already shed on the subject, a look into the future of a few decades, seems to discover a realization of the grand thought that all diseases, except those resulting from traumatic lesion and varying temperature, will have been traced to their true source—infusorial and cryptogamic causation. Then it will be, by hygienic, prophylactic, and an intelligent therapeutic direction of medicine, that the physician may say to disease: "Thus far shalt thou go, and no farther."

Of all those who shall have done most to effect this happy change, no names will stand higher on the roll than those of Zeuker and Salisbury; the one the discoverer of the true animalculæ cause of trychiniasis; the other the true cryptogamic cause of malarial fever. To them will the feelings of a grateful people, yet unborn, ever come welling up and go out with heartfelt reverence; and as time elapses will the stream increase with coming ages, and roll on and on, ever widening and deepening, till the last billow of time shall have broken on the shores of eternity.

ART. III.—A CASE OF PUERPERAL ECLAMPSIA TREATED BY CHLORAL HYDRATE—RECOVERY. By JOHN FIELD, M. D., Sheridan, Oregon.

At 4 o'clock on the morning of the 12th (Sunday) of October, 1873, a messenger arrived at my house with a request to visit immediately and in haste the wife of Captain L., distant twelve miles. The messenger told me the child was already born. I had been engaged to attend her during her accouchement, and the husband told me that he had never been able to get any one in time, and did not expect to have me in time to render any assistance before the birth of the child. I arrived at the bedside of my patient as quickly as an Oregon horse could go (and here we ride fast); found her doing well, and got this statement: Husband said his wife awoke him at 3 o'clock A. M., and before he could get out of bed and light the lamp, which was right at hand, the child was born. She had but one expulsive pain. Placenta came away in about an hour. This being about the history of all her accouchements—six.

Now, I crave the indulgence of the editor and readers of this Journal while I drop this case here, and give the history of the preceding accouchement, as I learned it from her husband on that day; and here, before going on, I will state that Captain L. is a man above ordinary intelligence, and being a constant attendant, and closely noting every point in her previous case, he was enabled to give a history of it which was both interesting and instructive.

The previous labor was about thus: She having suffered in each lying-in from excessive flooding, and then remained for months so debilitated that she was unable to leave her room, the friends came to the conclusion that if this excessive flooding could be controlled she could get up the sooner. Steps were taken to modify the lochial discharge, and in the course of eight or ten hours the discharge ceased entirely, and for the first time in her life convulsions supervened. The family was living in town, and Mrs. L. had the services all the time of

two, and part of the time of three of the most eminent practitioners in the place.

The leading features in the case, as I learned from the husband, were about as those cases always are, and the mode of treatment relied on principally was venæsection. This was about four years ago. My patient is the mother of the boy whose case I reported, and is published in the September number, 1872, of this Journal, page 286.

I will now revert to the case under consideration. After receiving the above history, I examined her closely. Her mind was clear, appetite good, bowels regular, passed urine, lochia were sufficient, uterus well contracted. In fact, I felt confident that I had not seen a woman in better condition; had been remarkably well (for her) months before her accouchement. She said to me when I went to her bed to take leave (4 o'clock P. M.), that she felt no apprehension of being like she was before. In fact, she felt so buoyant that she set an early day when she would visit my family. I went home, and at 10 o'clock a messenger came for me, with the sad intelligence that about 9 o'clock she suddenly commenced having convulsions, and had two in rapid succession.

Upon arriving at her bedside, which I did about midnight, I learned that she had had five convulsions. I shall not attempt to describe in detail the peculiarities of the convulsions or the state of the patient following the spasm, for every practitioner is painfully aware of their alarming appearance, and rarely forgets it; but suffice it to say, that the convulsions were about as all such cases are, so far as general appearance was concerned. The convulsions were violent, and continued, with about a uniform interval of two hours between them, till 1 o'clock in the afternoon of the next day (Monday), when they ceased. The most marked peculiarity of the case was, that from the time she had the first convulsion the feet and hands were cold; the face, instead of presenting the appearance usually observed, was pale, features pinched and presenting the appearance of one well advanced in cholera. The

lochia ceased to flow from the first convulsion; no heat about the head, not even during the paroxysm. When the convulsion ceased, the pulse fell till it could not be counted. She was totally unconscious for three or four hours; could not even swallow. I gave it as my opinion that she would die in a few hours. But after remaining in this condition for three or four hours, there were manifest signs of returning consciousness; the first motion was the forcible contraction and extension of the right lower limb. The expression *kicking*, expresses the motion better than any other term. She lay in a state of mental unconsciousness, but forcibly kicking her right leg for some hours. That peculiar motion became more modified toward morning (Tuesday).

On Tuesday morning her power of articulation was restored, but not all the functions of the mind. She had no knowledge of anything that had passed, nor did she have a true conception of what was passing before her. She now commenced to talk, and when not controlled she would talk incessantly; but she had no knowledge of the subject-matter upon which she talked. It seemed as if her brain was in a state of very great activity, but entirely unbalanced, so that she would talk on any subject which might accidentally pass through her mind; seemed entirely devoid of caution. Up to this time, and not for three days after, did she know that she had a babe. I presume I have said enough without telling the reader something about the course of treatment.

As soon after I reached her bedside as she could swallow (she just having had a convulsion), and that was usually about thirty minutes after having a convulsion, I gave her one tablespoonful of the following—

℞.—Hydrate Chloral, ℥ij.;
Aqua, ℥vj. Mix

This was given from the time I paid the first visit, after convulsions supervened, in tablespoonful doses at intervals varying from thirty minutes to an hour and a half. I gave her nothing else during the progress of the case. During the continuance

of the convulsions this prescription was given more frequently than at any time after their cessasion. After using the medicine for two or three hours, it was perceivable that the actual paroxysm was growing somewhat shorter, and did not appear so violent, and sleep that followed it did not appear so deep and profound. She gradually grew more and more quiet, and breathed more naturally and less laboriously after each convulsion, until they ceased to return at the time, followed by the state of total unconsciousness, as before stated.

During the existence of the nervous irritation and unbalanced condition of her mind, which I before mentioned, she could be quieted in a short time by the free use of the above prescription; and by giving two or three tablespoonsful in the course of an hour she would fall into a quiet sleep, and so remain for an hour or two, and each time, on awakening, it was apparent to a close observer that she was gradually regaining the equilibrium of her nervous system, as well as having more protracted glimpses of rationality. So she continued from day to day gradually improving, till I dismissed her on the eighth day. She is now (November 1st) as fully recovered as women usually are who have passed their accouchement twenty days only.

I would earnestly recommend the chloral hydrate to the Profession in all cases and under most of the circumstances when they have usually been in the habit of prescribing for these cases antispasmodics or narcotic extracts. I deem it advisable in all cases of nervous irritation, hysteria, etc.

I would thank any member of the Profession who will take the trouble to communicate his experience in the treatment of the disease that forms the subject of this article, or in regard to the action of chloral.

I think that physicians who have failed to derive any benefit from this remedy, have not given it in sufficient quantities, or repeated at the proper intervals.

ART. IV.—CATARRHUS GRAVIDUS. By HENRY V. GRAY, M. D., Richmond, Va., formerly Surgeon of Artillery C. S. A.; late Professor of Anatomy and Physiology, Roanoke College, Virginia.

This singular affection seems to have received but little notice from the Medical Profession; and as yet has never been properly classified or treated as a distinct disease. In passing many works in review for an explanation of the strange phenomena presented in the case hereinafter detailed, with its sad results, I can not find even an approximate of its singularities, much less a specification of physiological and pathological departures. My only guide or precedent then for giving the name Catarrhus Gravidus, or Catarrh of the Pregnant State to this strange disease, will be found in Cazeaux's Midwifery, fourth American from the sixth French edition, page 283. Under "lesions of respiration" the author uses the following language: "As to the cough, it is only dangerous as regards the pregnancy by the violent jars sometimes given, which may produce an abortion. Indeed, all the observers who have written on the influenza have carefully noted the frequency of this accident in women who are affected with it." It will be observed here that this distinguished author speaks only in a casual way of an influenza existing at this period, without any attempt to establish it as a true disease, as much as pneumonia, whooping-cough, or any other of our recognized affections, but as a trivial affair, to be treated by some simple "demulcents and pectorals." Catarrh, in its sporadic form, is not regarded as an influenza, but only when prevailing epidemically do we assign the latter name. The pregnant state produces frequent perversions of biotic force in many constitutions entirely within the purview of inference and in strict support of healthful coïncidence; hence it is, when any grave departure takes place, we are still found clinging to the idea that it necessarily belongs to the pregnant state, and therefore must not be looked upon in a serious light nor treated upon ordinary principles, for fear of interfering with the relations of mother and child. I am free

to confess my reluctance in taking hold, for fear of interfering with this relation, on account of the many ghastly phantoms of the lecture-room of my collegiate days, where, it seemed to me, the professors of surgery and midwifery, not content with impressing upon the student the great importance of watchfulness and care, with a thorough understanding of the theory and practice of their subjects, but delighting to make themselves appear great and grand Waterloo operators in the eyes of these young ones, they finish each lecture with a ghostly harangue of old women's tales to children at night by a winter's fire. Hence it is many of us are timid, and in many instances rendered ineffective in an emergency, from impressions left upon the young and sensitive mind by these old women.

But to return to the subject under consideration, I do not intend to embrace the ordinary catarrh that might set up at any time with a system congenial to its atmospheric influence, but to a catarrh of the air passages, having its election alone in the pregnant state, brought about by unknown influences and maintained by some specific condition. How many of our diseases have the same fate? The extreme infrequency of this disease in my practice, this being the only instance of its appearance in an experience of fourteen years, makes it none the less worthy of notice and special investigation; but, on the contrary, may be at some future day a complicating agent of the pregnant state of no mean import for the display of skill and accuracy of judgment.

I shall not attempt to offer any theory for the disease, but present the case as it is, leaving the criticism of the distant future to sustain me in specializing this as a distinct disease, and the pathology justifying the title of Catarrhus Gravidus. This spasmodic action of the fibres of the uterus may be due to some inherent treatment, or it may be of central origin, causing tonic convulsions at one part of the system and an *opening of the flood-gates* at the other. I have observed in several instances a tension about the chest similar to that of tetanus, with excessive vaginal leucorrhœa, resembling the ca-

tarrh in this instance of the pulmonary tissue. In other instances, I have witnessed great tension about the head, with free elimination of urine loaded with mucus, and this very eliminating power, whether from the chest or kidneys or vagina, seemed to be the essential of cure; first creating and then curing itself, provided the vis medicatrix naturæ was not lifeless or asleep, in which case we, as physicians, must ply a coercive force sufficient for a compliance with its professions and obligations.

Was summoned to the bedside of Mrs. L. on February 21, 1873. Upon inquiry and casual examination, I found her near the period of accouchement, with tonic spasms of uterus and decided tension of abdominal integument over its surface, without any relaxation of enraged fibres. Found excessive rigidity entirely unlike the regular pains of labor, which are characterized by alternate relaxation and contraction. To the touch, the same tonic action was manifested in the cervix as in the fundus, without, of course, any progress in labor. Like the miser in his death grasp upon the almighty dollar, for fear of losing, he will not relax his hold to invest his money; thus robbing himself of the interest and letting the capital fall still-born upon his hands a strangled and suffocated thing. I am not inclined to lay undue stress upon this tonic or spastic condition of the uterus, further than to serve my purpose in accounting for certain results. My attention was now directed to a severe cough and the extreme emaciation of the patient, which had been steadily progressing for several months. When I first entered her chamber she was sitting up in a chair, expectorating profusely and complaining of great pain and tension over the bowels. An examination of the sputa showed a large amount of mucus of the consistence and character of that of whooping-cough. I at once instituted a critical examination of the chest, expecting to find some serious lesion of the pulmonary tissue, but to my surprise could not detect anything special, except here and there a dull spot with a general musical, rhonchus condition over the entire chest. Upon directing my

patient to cough, large quantities of mucus would be ejected, and upon a second examination of the chest the dull spots would disappear, to take up their seat elsewhere, showing very conclusively it was only temporary, and due to filling up of the cells. These musical notes of high and low pitch, with tension and relaxation following each other in quick succession, increasing and diminishing according to the amount of sputa ejected, were my only pathological guides. This excessive secretion of mucus, together with the enfeeblement of my patient, made me very uneasy as to her safe delivery, as I could not see anything but a fatal termination if this secretion (which must have amounted to at least a quart or more every few hours) was kept up. After a detention of several hours, I left her, with instruction that should her condition not become more favorable within a few hours, I must be sent for. I left some morphine powders, with "demulcent pectoral," to be given according to the amount of pain and difficulty of expectoration About 10 o'clock P. M. a messenger came to inform me that my patient was suffering a good deal; I directed him to go after my friend Dr. T., to meet me in one hour, as I doubted very much my physical capacity to stand up to a serious, protracted case, as I was not yet entirely convalescent from an illness of between eight and nine months. We met promptly at the time indicated, and, upon a thorough review of the case, regarded her condition as quite critical, and the phenomena unusual. As the pains were quite severe, or rather the tightness or tension (not from excessive volume of the uterus) my friend suggested the use of morphine hypodermically, to which I readily assented. It gave considerable relief to the pain, but did not lessen the tension of the uterus. We kept this up, together with dry cups to spine, until the evening of the 22d, one of us remaining with patient during the time. We did not find any progress in the labor or lessening of the pulmonary secretion, but considerable nausea and vomiting from the morphine. We now placed our patient upon champagne, and beef and chicken tea to sustain her strength, hoping the angry uterus

would soon be comforted. Finding all our efforts fruitless, I suggested (from considerable experience and confidence) the hypodermic use of morphine and atropia solution, which we administered between 11 and 12 o'clock on said night. The patient was soon quieted and fell off to sleep, and from that time until the morning of the 23d she received for the first time several hours of sleep and rest. We made an examination near 9 o'clock on the 23d, and found some progress in the labor, and less tension of the uterus. I now suggested that we repeat the prescription and apply a belladonna plaster over the womb. We carried out our directions, and soon found our patient asleep. In the afternoon, between 4 and 5 o'clock, we met again, and found the condition more favorable for labor, and the patient encouraged in strength from the rest she had received, but was still excreting large quantities of mucus. My friend Dr. T. made a vaginal examination between (if I am not mistaken) 10 and 11 o'clock that night, and found some part presenting rather singular to him; he called me to the bedside to make an examination, which I did, and felt what I regarded a shoulder presenting. I did the best I could and stood at my post, doubting in my own mind what part was positively presenting, but was soon rewarded in my efforts with a safe delivery to the mother. In examining the child, which was still-born, we found one-half of the skull gone (that is, the crown,) leaving in its stead a solid, fleshy tumor resembling a fleshy false growth sometimes noticed upon the surface of the skin, but entirely devoid of an integumental covering. I accounted for this singular deficiency of bony tissue in the crown of the skull by absorption due to pressure and constant striking of the head (this being the part presenting) against the pelvis, from the almost incessant cough of several months, thus concussing and pressing this portion of the head.

We now prescribed for our patient a cough mixture of syrup senega and carbonate of ammonia, and in a few days the lungs were almost entirely disgorged and the patient convalescent. She rapidly recovered after delivery notwithstanding; both of

us were inclined to the opinion that she would not live many months, rather looking upon the pathological condition as being of tubercular origin.

ART. V.—GROOVE VERSUS CANULA NEEDLE FOR SUTURES. By PAUL F. EVE, M. D., Nashville, Tenn.

Within the past few days I received volume 17th of the "Transactions of the American Medical Association," and find in it the minutes of the meeting held that year in Baltimore, 1866. In it is found "a description of an original instrument to facilitate the introduction of *in situ* pins for sutures in wounds," etc., "by Alfred C. Post, M. D., Professor of Surgery in the Medical Department of the University of New York," etc., etc. In volume 19th, "Nashville Journal of Medicine and Surgery" for 1860, six years previous, may be seen a cut with an account of a new needle for sutures. In March, 1869, volume 7th, "Richmond and Louisville Medical Journal," is published a case of "Vesico-Vaginal Fistula," in which the sutures were inserted by means of this canula needle. Then in volume 20th, "Transactions of American Medical Association," meeting in New Orleans, 1869, was presented this same needle for applying ligatures and sutures.

No allusion is made by either party, Dr. Post or myself, to what the other had done on this subject; and, as has been asserted above, I claim that I had not heard or seen what he had published in 1866; so he may also not have known that year what I had printed in 1860. Now for the proper estimate of the two needles, the groove and the canula.

I stated, in 1860, that an objection to the general employment of metallic sutures, then as now, almost universally recommended, was the want of a needle to deposit them readily and precisely where intended or designed. The wire, when doubled at the eye of the common surgical needle, becomes cum-

bersome, is distorted and difficult to be placed accurately. Indeed, the curved or straight needle, even with all the holders or *port-aiquilles* yet invented, is but half an instrument—it lacks a handle. * * * * My instrument is mounted on a fixed handle, and is, therefore, under the control of the operator. Again, by reversing its action—that is, by first transfixing the flaps, then passing a waxed thread, wire, or pin into the opening near its point, then withdrawing the needle out of the flap, the ligature or suture is deposited. In volume 20th of "Transactions of the American Medical Association," 1869, it is asserted that this needle may or may not be armed with the material for the suture or ligature when thrust through the soft parts or under an artery, as the thread, or wire, or *a pin for the twisted suture*, can as easily be then placed in the distal opening of the canula, and thus equally deposited in its track by withdrawing the instrument. I moreover stated that no special claim was advanced for originality, as this was only a modification of similar needles already suggested; but that its great simplicity, small cost, and extensive application were its chief recommendations.

I fully agree with Dr. Post in his estimate of the *pin* suture, particularly in wounds of the face; and regard it, as he does, superior to all other kinds yet proposed; but do not concede that the "needle director," as he calls his instrument, is superior to mine, named by Tiemann & Co. the Canula Needle. They are about the same size, and have a similar point. His is, however, limited to pins passed along the groove after this is introduced through the flaps or edges of a wound, and the pin must be held *in situ* when the little instrument is withdrawn. Mine may be used for all kinds of sutures, pins, wires, threads, tendons, cat-gut, etc.; and moreover, may be introduced into either end of the canula; specially for pins at its distal opening where they are fixed in its curvature. In mine, again, the suture material can not deviate from the course of the needle, since it is retained in the canula; and lastly, no additional foreign substance is required to be passed along the track it makes in the

flesh. It is certain that the suture must be deposited precisely where the needle penetrated, for it takes its place as the needle is withdrawn.

ECLECTIC DEPARTMENT.

"Carpere et colligere."

Art. I. — The Prevention of Loss of Blood in Operations.

Considerable interest has been excited among surgeons on the Continent, and also in this country, by the description, by Professor Esmarch, of Kiel, of a proceeding for preventing the loss of blood, which often interferes seriously both with the performance and with the success of operations. The proceeding consists in pressing the blood out of the part to be operated on, and preventing its return until the operation is completed.

A clinical lecture of Professor Esmarch lies before us, in which he gives a graphic description of an operation in which his plan was applied with complete success. The case was one of extensive necrosis of both tibiæ. While the patient was being brought under the influence of chloroform, a bandage of India-rubber webbing was applied tightly round each leg, from the toes to above the knee. Immediately above the bandage a piece of India-rubber tubing was drawn firmly four or five times round the thigh, and its ends were secured together by hook and chains. This being done, the elastic bandage was removed from the leg, which was found to be quite exsanguine; in fact, like the leg of a subject on the dissecting-table. The operation for removing the sequestrum was then performed. So utterly bloodless was it—so entirely free from the o which often requires the aid of an assistant to clean the before the surgeon can proceed with his operation— Esmarch was able to dispense altogether with the aid

sistant. In fact, his ordinary assistant, Dr. Peterson, was at the same time operating in a similar manner on the other leg of the same patient; Dr. Esmarch having decided that, as he could save the patient's blood, he would also avoid subjecting him to two operations at different times, and thus spare him the tedium of two processes of convalescence. The operation having been completed and the wounds dressed with plugs of amadou and antiseptic applications (Dr. Esmarch being apparently a follower of Professor Lister's doctrines), the caoutchouc tube was removed and the blood allowed to reënter the leg. There was no hæmorrhage; the whole amount of blood lost during the operation being about a teaspoonful from the bone. The subsequent progress of the case was most satisfactory; the healing process proceeded so rapidly that the patient was enabled to leave the hospital, at his own request, on the twenty-first day after the operation.

The plan here described has been employed by Professor Esmarch in eighty-seven cases of operation, from the beginning of the present year to August 15. Of these, twenty-one were cases of amputation and disarticulation (including six amputations of the thigh, eight of the leg, and one disarticulation of the humerus); eight were cases of excision, thirteen of removal of necrosed bone, five of operation for the removal of tumors. Of the eighty-seven patients, four only died. The amputation wounds generally healed by the first intention, with scarcely any traumatic fever. In no instance have there been any indications of local disturbance of the circulation as the result of the compression.

The method described by Dr. Esmarch is obviously applicable only, as he states, to operations on the extremities, and on the penis and scrotum; in other regions of the body its application in the manner described is obviously impossible. Yet Dr. Esmarch makes a very ingenious suggestion for its application in operations on the head, neck, or trunk, remarking at the same time that the idea is one, the possibility of carrying which into practice requires to be tested by experiment. It is

that, as a preliminary to the operation, the elastic tubing should be applied around one or more of the limbs, so as to retain a store of blood in them, which might be allowed to reën-the circulation from one limb after the other, if the patient showed symptoms of being exhausted by the hæmorrhage attending the operation.

One caution he gives, and it is an important one. When infectious material is present in the limb to be operated on, the elastic bandage must not be applied, lest the poisonous matter should be drawn into the general circulation. In such cases the limb is to be raised so as to empty it of blood as much as possible; and then the compressing ring of elastic tubing is to be applied.

The method described by Esmarch has been tested and found efficient by Professor Bilroth, of Vienna, Dr. Mendel, of Trieste, and the surgeons of St. Thomas' Hospital, in London. Its simplicity and the successful results which have hitherto attended its application, render it worthy the attention of surgeons. In cases where the surgeon has to operate in circumstances where he can not obtain efficient assistance, it must be of great value. —*British Med. Journal.*

ART. II.—OF THE USE OF POST-PARTUM BINDERS. By DR. CAIRNS, of Edinburgh.

At a recent meeting of the Obstetrical Society of Edinburgh, a somewhat remarkable paper was read by Dr. Cairns, opposing the use of binders after parturition, and what is the strangest of all, his extraordinary views appear to have met with very general approbation from the members present.

The disadvantages in the use of binders enumerated by Dr. Cairns are as follows:

1. That their application entails unnecessary trouble upon the accoucheur. Dr. Cairns confesses that when he first en-

tered upon practice, it cost him more trouble to apply the binders, in many cases, than to deliver either the child or placenta.

2. That their application unnecessarily exposes the patient, which, if several persons are present, may thereby shock her moral sensibilities; it may, moreover, expose her to currents of cold air, which, on her part, may lead to disastrous results.

3. Post-partum binders impede the circulation, slipping far above the region of the uterus, thus interfering with the venous circulation, and thus tending to aggravate two diseases very common in pregnant women—viz., varicose veins and hæmorrhoids.

4. They are rarely of proper form. They should properly extend from the ensiform cartilage to a considerable way beyond the nates.

5. In cases of post-partum hæmorrhage the patient may die before the binders can be removed in order to apply the proper remedies for its arrestment.

Dr. Cairns, in conclusion, compares parturition in civilized and uncivilized conditions, and those two with the parturition of the lower animals. The latter, he affirms, owing to their pendent bellies, evidently require binders much more than women.—*Nashville Jour. of Med. and Surg.—Boston Med. and Surg. Jour.*

ART. III.—SHOCK AND SYNCOPE. By DR. T. LAUDER-BRUNTON.

In an able paper Dr. T. Lauder-Brunton reviews the causes, symptoms, pathology and treatment of shock and syncope. He believes painful impressions (more especially extensive burns), injuries to bones, and, above all, injuries to the abdominal viscera and genitals, to be the principal causes of shock, which is usually attended with pallor and coldness of the skin, weak pulse, oppressed and sighing respiration, dilated pupils, and

sickness. There are two chief factors in the production of shock: First, the stoppage of the heart from the paralyzing influence of a sudden and violent injury to the nerves, and second, as a result of the same influence, dilatation of the vessels, particularly those of the abdomen. These two enable us to account for all the observed symptoms—the weak pulse, the low arterial tension, the pallor and coldness of the surface, etc.

Syncope probably depends chiefly on dilatation of the arterioles, and its duration is less than that of shock, because of the greater contractility of these vessels than of the veins.

In the treatment of shock we endeavor to counteract the feebleness of the heart by stimulants, one of the most powerful of which is heat; so we apply warmth to the surface, especially over the cardiac region, and at the same time give brandy and ether internally. A still more important indication is to cause contractian of the great veins in the abdominal and thoracic cavities, so that the blood, instead of stagnating uselessly in them, may be sent onward to the heart. Painful impressions on the sensory nerves will often have this effect—strong mustard plasters, thrashing the feet and legs with switches, etc. Digitalis, as possessing the power of contracting the vessels and strengthening the pulsations of the heart, is of great value, and should be given freely. In syncope the first idea is to restore the circulation to the brain; and this we do by laying the head on a level with the body, or even somewhat lower. The next thing is to raise the blood-pressure; and, as the condition is due to dilatation of the arterioles *of the surface*, we pursue a plan of treatment opposite to that employed in shock, and dash cold water in the face and chest and hurry the patient from a warm room into the cold air, in order to cause contraction of those vessels. For the same reason we apply ammonia or aromatic vinegar to the nose.—*London Practitioner*, October, 1873.

ART. IV.—ON THE TEACHINGS OF DR. J. MARION SIMS REGARDING THE CAUSE AND TREATMENT OF STERILITY. By DR. VON SCANZONI.

The fundamental idea of the modern surgical treatment of sterility by operations designed either to dilate or to straighten out the cervical canal, is that there always exists a mechanical obstacle to the entrance of the spermatozoon. Scanzoni earnestly protests against the acceptance of a theory based on careless observation of phenomena, and which necessitates the frequent performance of an operation which is in itself dangerous, and in some cases fatal. Opposed to the new school of gynæcologists who regard the publication of Dr. Marion Sims' book on uterine surgery as the dawning of a new era in this hitherto neglected branch, he maintains that the want of careful histories of cases, and a certain or rather an *un*certain looseness of expression with regard to actual results, so decidedly deprive it of scientific value that its review becomes a difficult and arduous task. So far from regarding a mechanical obstacle to the entrance of the seminal fluid into the uterus as the sole cause of sterility, he brings forward and urges the importance of the following morbid conditions, which may be and often are the causes which prevent conception—viz., functional disease of the ovary or testicle, which results in the production of a vitiated ovum or spermatozoon, or the occurrence of any one of the numerous pathological conditions which may prevent the exit of the ovum from the ovary, its reception by the Fallopian tube, and its passage into the uterus. We are, for the most part, utterly unable to diagnose the existence of any of the abnormal states which would produce such a result; and yet the possibility of conception depends on the physiological and harmonious sequence in the functional activity of these organs.

In order to prove that conception may occur in spite of the most extreme displacement, several cases are given in detail, where the introduction of the sound was rendered absolutely impossible, owing to the marked flexions of the uterus, or, as was the case in one instance, to the existence of an inguinal

hernia of that organ; and yet in all the histories given, conception repeatedly took place. While Scanzoni admits the general truth of Marion Sims' statement, that the pain of dysmenorrhœa depends on a mechanical obstacle to the passage of blood from the cavity of the uterus, he still maintains that *all* cases can not be explained in this way, and states that some of the most severe cases of uterine colic he has ever seen occurred before one drop of hæmorrhage had taken place in the uterus, as he has repeatedly proved by the introduction of a sound, while the pain sometimes continued after the flow had been freely established, but not sufficiently so to take away the pressure from the over-excited nerves. So too the most intense uterine colic may be excited by the application of leeches to the cervix, even in cases where care has been taken to guard against the passage of one of them into the uterus—an accident which some authors have availed themselves of to explain the severity of the pain.

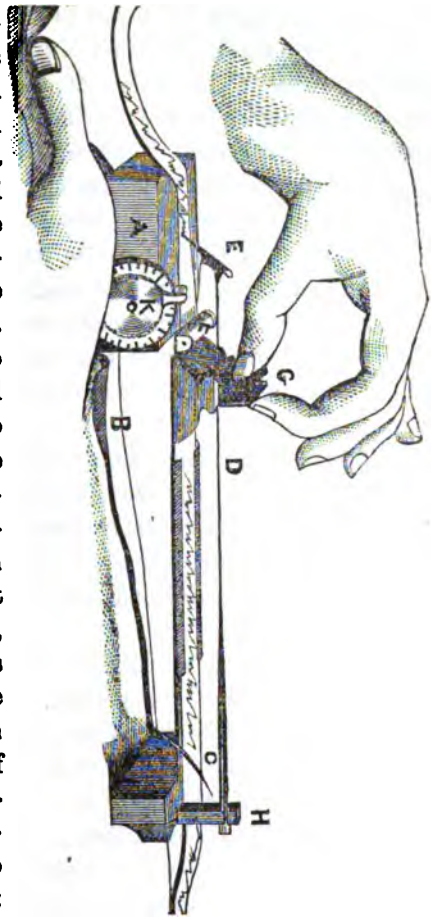
Scanzoni then goes on to show in detail that in many cases it is simply impossible to diagnose, either by the fingers, sound, speculum, or by the aid of the sponge-tent, such a contraction of the cervical canal as to justify us in regarding sterility as its *necessary* consequence, whether this contraction be due to a congenital or an acquired constriction of the os externum; the infiltration and swelling of the mucous membrane following a chronic catarrh of the organ, and a consequent development of the folds of the arbor vitæ; the presence of enlarged follicles with broad bases of attachment (the ovula Nabothi); new formations grouped together under the head of mucous polypi, which for the most part originate in these same follicles; more or less extensive fungus excrescence caused by papillary growths; spastic contraction of the os internum; the various and often-occurring forms of flexion; diffuse hyperplastic growths affecting either the entire cervix or only certain portions of it; myomatous and fibroid tumors having their seat either in or near the cervix; or to intra-mural or pedunculated growths attached to the body of the organ. In all of these

conditions neither the sound nor our other aids to diagnosis enable us to exclude pregnancy, as the histories of numerous cases given by Scanzoni show.

The author deplores the incompleteness of the statistical tables in Sims' book. It is true that it is stated that the operation for the Bilateral Incision has been performed five hundred times, but in only six of these cases it is stated that the wished-for result was attained—viz., that the woman conceived. Four other cases in which conception followed the amputation of the cervix must be added to these. While Scanzoni does not doubt that Sims has other more extended statistical statements which place the operation in a more favorable light, still he says that these are the results from which we are asked to accept the operation. These ten cases are carefully analyzed and reviewed by Scanzoni, who finds that seven of the women had been pregnant before the operation; in other words, that we have to do here with cases of *acquired* sterility, in which the prognosis is unquestionably more favorable. The fact that the operation is not without danger is then insisted upon by Scanzoni, and the members of the Profession are exhorted to review calmly the evidence on which this operation rests—the value of which can not be denied in a few well-selected cases—before they follow blindly the so-called new school of uterine surgery.—*Medical Times.*

ART. V.—A PRACTICAL SPHYGMOGRAPH. By E. HOLDEN, M. D., Newark, N. J.

Sir,—Presuming that to those medical men who have looked with sanguine expectation to the sphygmograph as a means of scientific research, and to all lovers of progress in medical science, the advent of an instrument practical as to expense, durability, and facility of application will be a satisfaction, I



send you a drawing and description of one which has for two years been used with gratifying success. A crude and imperfect idea of this was once presented in this Journal, and since then much time and expense have developed the perfected instrument. That it has been used so long, and after a thousand tracings has required no repair, will perhaps be sufficient evidence of durability; but the Profession may be interested in the conclusions grown out of so many observations, and although conscious that a greater multitude of experiments alone can determine the position of sphygmography as a distinct science, yet the following have appeared to me to be facts regarding it:

1st. That it is to be relied upon in many questions of diagnosis of obscure and simulated diseases.

2d. It furnishes a means of ascertaining the condition of the arterial and venous circulation, the ability of the heart to equalize these, and the extent of impairment in disease of the heart itself.

3d. It exhibits with accuracy the initiative action of remedies prior to any external and sensible manifestation of the same. Thus, in experimenting with quinine, a half grain taken

dry upon the tongue was found to show an effect upon the circulation as promptly, but in a different manner, as larger and repeated doses. The action of gelseminum and aconite was readily comparable by the tracings taken at intervals of three minutes. *The opening, therefore, of a new field in experimental and therapeutical medicine is at once shown.*

4th. The condition of the nervous system, in its relation to the economy as a vital power, is readily exhibited, and with a dictionary of tracings, such as would result from extended experiments, the instrument may prove invaluable both in prognosis in serious disorders of the brain and spinal cord, and in the diagnosis of the numerous occult affections of these structures.

5th. Such an instrument may prove of great value in life insurance in ascertaining the eligibility of applicants.

Several facts of a general character have also developed during my investigations, and no one using the sphygmograph can expect to be otherwise than disappointed without fully appreciating them. Thus:

1st. No tracing, however smooth and ample, is, of necessity, the correct record of the patient. Two tracings in the same minute, *if under different pressures, may differ widely.* Hence it is essential to take several at gradually increasing pressure, *that being accepted which is of greatest amplitude.* Others may then be continued at that degree. (The above instrument is so constructed as to allow of a pressure equal to two or more pounds, and adjustable with the greatest ease without removing.)

2d. The pressure exerted is so vital an element that tracings of patients at different degrees are rarely comparable.

3d. Tracings of radial arteries in one patient are not comparable with those of the ulnar, femoral, or carotid in others.

That the Profession may have the amplest means of determining the significance of sphygmographic writings, and in the belief that with an instrument easily applied and accurately adjustable in its means of recording the compressibility of the artery (a point in which all previous inventions have been de-

fective), that with such an instrument a great and new field of medical science is opened, Messrs. Otto & Reynders, of New York, have undertaken to supply it at a price hardly sufficient to compensate them for their labor; the great difficulty in the way having thus far been the cost of watchwork on this side of the Atlantic, and the limited number likely to be required.—*Medical Record*, October 15, 1873.

ART. VI.—MIDWIFERY NOTES FROM BRITISH KAFFRARIA, SOUTH AFRICA. By DR. C. J. EGAN.

From these we abstract the following: The cases which Dr. E. has seen have occurred among the natives who have been brought somewhat under the influence of civilization. They are all cases of difficult or tedious labor, requiring professional assistance.

About twelve hours is considered to be a natural labor in a primipara, and many last for a much longer period. Amongst multiparæ, labor is much shorter in some cases, lasting not more than an hour, or even half an hour; but these are very exceptional. They recover from the effects of labor much quicker than Europeans do, some who have required operative interference having been standing up and walking about half an hour after delivery.

The obstetric position adopted by the natives, is sitting with the heels drawn up to the buttocks, while the shoulders are generally supported against one of the poles which support the roof of the hut, or against some of the female friends, who are generally present in full force. Of course, in this position, no pressure can be made upon the perineum by the hand of the attendant, but the writer thinks the perineum is protected by its resting on the firm floor of the hut, and that the too sudden passage of the child's head is thus prevented.

The pelves, it is thought, are not larger than those met with

in Europeans, but they are certainly more largely enveloped in their fleshy cover. The head of the child is usually smaller than is met with in Europeans.

There are two different methods of treating the funis. In some cases they do not cut it until the placenta has been expelled. Dr. E. has been called to a case of twins three hours after the birth of the first child—the second lying across and requiring to be turned; and when he arrived the first was lying on the floor, still attached by the funis, in which all circulation had ceased, the child being alive and well.

The second method is to cut the funis across with a rough reed—in fact, to saw it slowly across, making a ragged end to it, as if it was torn—and thus effectually prevent hæmorrhage.

Flooding is a very unusual occurrence, and the writer has never been called in to see or prescribe for a case of the kind.

Among the native infants, one is much struck with the numerous cases of umbilical hernia. Little Kaffirs, from a year to four or five years of age, are to be met with running about quite naked, with large protrusions at the navel—sometimes the size of a hen's egg. Yet these hernia seem always to disappear without any remedial measures being adopted. Though often seen in children, it has not been met with in adults.

It originates, probably, from their never using a binder on the infant when first born; and it appears to be removed naturally on the development of the abdominal muscles when the child begins to run about. It shows that the occurrence of such herniæ among European children need not be a cause of so much anxiety as it usually is. It will most likely cure itself if left alone.—*Med. Times and Gazette.*

ART. VII.—SKIN GRAFTING. By H. H. TOLAND, M. D., Professor of Clinical Surgery, University of California.

Being satisfied with the result of the operations performed during the past two years, of grafting or transplanting the en-

tire skin in simple ulcers, as well as those resulting from burns (the plates of which, with the manuscript, have been presented to the State Medical Society, and will appear when their Transactions are published), recently I have determined to ascertain whether the same treatment would succeed in cases of a specific character.

Samuel S. was admitted into ward B at the County Hospital, February 2, 1873, with a callous syphilitic ulcer of the right leg, which was of six years' standing. He had suffered from nodes, rheumatism, and, indeed, from all the symptoms of secondary and tertiary disease. The ordinary anti-syphilitic course of treatment was prescribed, and continued from February until the 15th of May, without any decided improvement, and then I removed, with his consent, a portion of skin half an inch wide and one inch and a half in length, from the inner surface of which evrey portion of the cellular tissue was removed by one of the students. The strip removed was then washed, divided into three pieces, and applied to the ulcer, one near each extremity, and the third in the centre. They were secured by adhesive plasters, and when they were removed in seven days, the cuticle adhered to the plasters, and I supposed the operation was a failure. But to the astonishment of myself and a number of the class—who witnessed the operation—cicatrization had commenced at every point to which the skin was applied; the character of the ulcer has greatly improved, and I now feel confident that with a proper constitutional treatment such ulcers can be healed as speedily as those of a more simple character, except when under the care of men who, from either prejudice or policy, refuse to prescribe the only medicine known to the Profession that will eradicate this terrible disease. I feel for any man who pretends to treat such diseases without the use of mercury. All the most popular syphilographers in the world advocate its use, and any physician who fails to avail himself of its specific effect may humbug the community for a time, but he can not establish a permanent reputation.—*Western Lancet.*

ART. VIII. — PURULENT PERICARDITIS — A CASE IN WHICH THE PERICARDIUM WAS FILLED WITH PUS. By JAMES GRAY GLOVER, M. D.

The following case is one of considerable rarity, and perhaps worthy of being recorded:

On the 12th of April I was called to see a little girl, Grace W., aged twelve, who had complained occasionally, but not severely, of pain in her left side for two or three months, had been ill for two or three weeks, and under the care of a homœopathic practitioner. I was told that her illness began with a slight shivering. There was no rigor throughout. She was pale and emaciated, and had a higher temperature than normal; on the second day of my attendance it was 101 degrees. The most noticeable complaint she made was that of excessive tenderness when touched anywhere, but especially about the chest. This rendered physical examination impossible. Her respiration was rather quick, and her nostrils were dilated more or less on breathing. She generally sat up in bed with her shoulders rounded. I could not make out the indications of tubercular disease, which I suspected, either in the lungs or in the abdomen. The first day or two of my attendance there was sickness, vomiting of almost everything taken, and a tendency to diarrhœa. The upper part of the abdomen was swollen and tender, and hard as far as could be ascertained. She became gradually weaker. She was clear and intelligent, but was occasionally excited in a semi-hysterical sort of way, and on the occasion of my visit the day before her death, went for a few minutes into a very curious trance-like condition, on coming out of which she sang in an Ophelia-like fashion. This nervous element in the case was very noticeable throughout, but I confess to being more impressed with the emaciation, the high temperature, the short breathing, etc. Though I had to content myself with a somewhat vague diagnosis, I had no difficulty in giving a very serious prognosis, which was verified by death in seven days. It is remarkable, that two days before

her death she managed to walk, after a fashion, a few feet from the sofa to her bed.

The treatment consisted in attempts to introduce nourishment, and, in the way of medicine, the administration of a drop or two of tincture of opium every three or four hours, which soothed and had a beneficial effect on the vomiting and diarrhœa.

At the post-mortem, the above facts received the following pathological explanation: *Thorax*—On percussing the chest and abdomen prior to opening them, extensive cardiac dullness, and dullness and hardness of the hepatic and epigastric region were marked. On opening the chest the pericardium was found very much distended, as if with a large quantity of fluid. This fluid turned out to be very thick greenish-yellow pus, which welled up out of a little opening made, till occasionally the opening became plugged with lymph. I collected a tumblerful of it, and much more remained. There must have been at least two tumblersful altogether. Much purulent lymph then appeared adhering to the inner surface of the pericardium. The substance of the heart seemed pale and soft. The endocardium and the valves were unaffected. The lungs were congested and adherent to the side, but did not contain tubercle. There was a quantity of serum in the pleura, but not pus. *Abdomen:* The liver was enlarged very much and universally congested. There was a good deal of straw-colored fluid in the abdomen; but no other morbid appearance was noted.

Remarks.—I never saw pus in the pericardium before, and from what I can gather from books and physicians and pathologists of authority, the case is one of rare occurrence. Clinically, it is curious to notice that such a quantity of pus can accumulate in the pericardium without more distress of the circulation, without more acute local symptoms, and without the coëxistence of acute rheumatism.

Dr. Wilks kindly sends me the following comments on my written account of the case, which will be read with interest: "Your case is an interesting one; I have seen two or three of

the kind, and in none was the pathology very clear—i. e., there was not the history, as one might have supposed, of rheumatic pericarditis, but the disease was insidious and undiagnosed, We have amongst our drawings in the museum an enormously distended pericardium of a case under the late Dr. Hughes. He thought the physical signs caused thereby indicated pleuritic effusion. The same thing occurred under Dr. Addison.

"In the Pathological Transactions for 1869 is a case of mine, where a lad died with pericardial effusion. This was evidently the result of an acute affection, although the history extended over some months. His symptoms were due to impairment of the heart's action, and such as are met with in ordinary cardiac disease.

I suppose the question is, whether such insidious and generally undiagnosed effusions are of a peculiar kind, and have a pathology of their own, or whether they are simply the exceptional and accidental consequence of an ordinary pericarditis from some constitutional peculiarity on the part of the patient, just as a pleurisy will now and then end in an empyema, or a peritonitis in a purulent effusion in the abdomen. I apprehend that the chances are in favor of this explanation. Paracentesis of the pericardium has often been proposed, and even practiced; but, unfortunately, in the three cases which I have seen where it would have been feasible, the diagnosis was not made."—*Cincinnati News.*

ANALYTICAL DEPARTMENT.

"Qui e nuce nucleum esse vult, frangit nucem."—PLAUTUS.

CONTRIBUTIONS. By Professor PAUL F. EVE, M. D., Nashville, Tennessee.

Note on the Treatment of Chronic Cystitis. By H. S. Purdon, M. D., Physician to the General and Skin Hospitals at Belfast.—The experiment succeeded so well in this and some

other cases that I became convinced that the urine in question formed a better material than the most esteemed injections. The bladder having been completely emptied by the catheter, from six to eight ounces of luke-warm distilled water were thrown in, and retained for about five minutes. After this had been removed, some tepid water is again slowly injected and retained for some minutes. A young and healthy individual now passes water into the syringe, which has been previously raised in warm water to a temperature of 25° R., and this is then immediately injected into the bladder, and left in for a longer or shorter time. The impression made by this normal blood-warm urine of a young and strong man—the temperature of which is generally higher than that which has issued from the diseased bladder—is sometimes in the highest degree favorable, so that in one case a single injection has been nearly curative. Whether this plan of treatment will prove successful in every case remains to be proved; however, it was useful in the one recorded. Probably chloral, or what has been called meta-chloral, might be tried instead; for, according to Dr. Dujardin-Baumetz, of Paris, chloral possesses the property of preventing decomposition of the urine; and Dr. Baumetz thinks that in certain diseases of the bladder it may be usefully injected into that viscus."—*Dublin Jour. of Med. Science.*

Treatment of Hæmorrhage Consecutive on Extraction of Teeth.—The following are the conclusions of a very complete essay published on the above by Dr. Joseph Moreau, in the last number of the "Archives Medicales": (1) Hæmorrhage in such cases is an accident ordinarily benign, but which should always engage the attention of the surgeon through the exception gravity which it sometimes presents. (2) As it takes its intensity from individual conditions or constitutional affections, the surgeon must consult the history of the patient and be mindful of the signs of hæmophilia. (3) When this predisposition to hæmorrhage exists, he must absolutely refuse to perform the extraction. (4) In cases where the hæmorrhage does

occur, the surgeon must empty the alveola of any foreign bodies, reduce the displaced osseous parts, resect any loose flaps of gum, or put them back into their places according to their extent, cause the patient to wash the mouth gently and repeatedly, and forbid all movements of suction. (5) Should the hæmorrhage persist, he must plug the alveola by means of a substance impervious to saliva, and make use of a contrivance for compressing the gum similar to the one described in this article.—*Lancet.*

Hypodermic Injections of Biniodide of Mercury in Constitutional Syphilis.—Dr. Ragazzoni has happily modified the formula advocated by Gamberini by adding to the solution of biniodide of mercury a little iodide of potassium, which insured the complete dissolution of the salt. His formula is: Biniodide of mercury, half a grain; iodide of potassium, sufficient quantity; distilled water, half a drachm. This liquid injected at once never produces an eschar, if it is introduced properly into the conjunctival subcutaneous tissue, and not the derm.—*Giornale It. del Malattie del Pelle.*

Post-mortem Examinations and Coroners' Inquests.—We have often had to remark lately on the intelligence displayed by juries in perceiving that an inquest without a post-mortem may be simply a farce. In these cases the jury has often been much in advance of the coroner. Another case has just occurred at Plymouth. Maria Hill died suddenly in the work-house. Apoplexy, of course, was the ready explanation, but the surgeon would not swear to it, and the jury were not satisfied, and demanded a post-mortem, which revealed two tumors of the brain as a cause of fatal epilepsy. The patient had been in Salisbury Asylum eighteen months previously. A sensible juryman complained of the loss of time to jurymen occasioned by the coroner not ordering a post-mortem in the first instance. Our readers will remember a case last year in which a man found insensible in the streets in the night, in Newcastle-on-Tyne, was taken to the infirmary, where he died. A post-mor-

tem was disallowed, on the score of economy, and the ready verdict for a pauper was found—death from apoplexy. The friendless pauper was then taken to the dissecting-rooms, where, in the course of things, a frightful fracture of the skull was discovered, produced—nobody knows how.—*Lancet.*

A Farthing Swallowed by a Child.—On the evening of October 24th, T. E——, in great alarm, summoned me to see his child, aged sixteen months, who had just swallowed a farthing. The child, being seated on the shop counter, picked up a farthing, and began playing with it. The mother, hearing the child make a sudden choking sound, turned quickly round, and found it struggling in a violent suffocative paroxysm. Almost immediately, however, the obstructing substance seemed to pass downwards, and the child was at once relieved. The farthing, upon which suspicion at once rested, had disappeared. Kind neighbors, always ready to tender gratuitous medical advice, of course recommended the administration of a purgative. On the contrary, I advised that the child should be fed for the next few days upon thick oatmeal porridge and similar articles of diet, with the view of producing as much solidity of the stools as possible, in the hope that the irritating coin, becoming enveloped in the feculent mass, might be safely carried in its progress through the alimentary canal, and, being thus protected, might produce the least possible injury to the intestinal mucous membrane. This diet was faithfully adhered to, and on the morning of October 29th, the mother, hearing the child cry out for the first time as if in pain, found, on examination, the coin protruding from the rectum, and removed it with her finger.

The points of interest in the case were: 1st. The tender age of the child; 2d. The length of time occupied by the farthing in its passage through the alimentary canal—viz., four days and a half; and 3d. The entire absence of any irritation or constitutional disturbance, the child having enjoyed its usual good health during the whole time.—*Dr. Turner, in the Lancet.*

Royal Medical and Chirurgical Society.—At the meeting of this Society on Tuesday evening last an exceedingly interesting paper was read by Mr. Jonathan Hutchinson, "On Abdominal Section and other Modes of Treating Intussusception." The paper was based upon a case of intussusception occurring in a young child on whom the author had successfully performed abdominal section, after other modes of treatment had been tried without good result. This was the first successful case reported in this country. The operation had been performed nine times; in four cases with a good result, and in five successfully. The author advocated its performance in those cases where the bowel had been down for a long time, and when all other means, as insufflation, injections, etc., had proved useless. —*Lancet.*

Treatment of Obstinate Constipation.—Dr. Macario, of Nice, in a communication to the "Lyon Medical," observes that in treating constipation most practitioners confine themselves to enemata, laxatives, or more or less irritating purgatives, which in point of fact rather aggregate than cure the affection. He therefore wishes to make known what he says may be truly termed a "heroic" remedy, which he has employed, during twelve years, with such constant success that he can not but regard it as infallible.

Constipation, as every one knows, may be produced either by intestinal excitement with deficiency of secretion (nervous constipation), or in consequence of deficient contraction of the muscular coat of the intestine. Here it is produced by atony or intestinal indolence, which bad anti-hygienic habits have induced and kept up. The prolonged contact of the fæces with the rectum blunts the sensibility of the mucous and muscular tissues, and the synergical contraction of the upper portion of the large intestine either does not take place or does so in an insufficient degree, constipation being the result. In *nervous* constipation the following pill should be given: Pure sulphate of iron, ten centigrammes; socotrine aloes, five centigrammes; atropine, from one-third to one-half of a milligramme. In the

atonic form, for atropine, one centigramme of powder of nux vomica may be substituted. By the aid of these pills regular stools may be procured, even in the subjects of obstinate constipation due to *ramollissement* of the brain and chronic myelitis with paraplegia. Dr. Macario gives from one to three pills immediately after dinner, the object being to produce one easy, natural, non-diarrhœic evacuation. If more than this is effected, the dose is to be diminished, one or two pills sufficing in most cases. The use of these "antistyptic" ought not to be continued indefinitely, a longer period being allowed to elapse between their administration in proportion as the constipation diminishes, it being of importance to allow the organs to resume their spontaneous action without any auxiliary. If the constipation returns, the pills can be again had recourse to.—*N. Y. Med. Jour.*

The Academy of Medicine in Paris on New Remedies.—At the last meeting of the Academy of Medicine, Dr. J. Lefort made a regular hecatomb of dozens of individuals who had applied for permission to sell secret and new remedies. One of them, named Meyer, had declared that he had found out a salve which cured all sorts of inflammation, from toothache to pulmonary phthisis. Another, a pharmacien, asserted he had discovered a means for curing hydrophobia before its development. Another had presented vermifuge cakes, and gloves made with cats' hair. A dyer, "grown too old to continue his trade," had invented a paste for corns and bunions, and an elixir for the teeth. A fourth would-be benefactor of suffering humanity sent in a complete course of pathology "for the benefit of man and animals," wherein a certain cure was to be found for hydrophobia, corns on the feet, angina, and the typhus of cattle. One Paquier had suggested the use of magnetized camphor ointment and camphor water, endowed with marvelous properties and "calculated to supersede the medical man." So they were all cut off with a stroke of the pen, and sceptical Dr. Lefort sent them to join the annual lot of ignored and discomfited applicants.—*Lancet.*

Recent Therapeutics.—An English contemporary gives the following therapeutical summary:

Carbolic Acid has been praised in prurigo and pruritus, subcutaneously injected in doses of about one centigramme of the acid mingled with water. It has been used externally in acute rheumatism as a liniment mingled with linseed oil.

Arsenic has been recently recommended in cases of strumous enlarged glands of the neck, and also in pellagra.

Bromine.—Inhalations of bromine have been used in croup and diphtheria; 30 centigrammes of bromine, 30 of bromide of potassium, and 150 grammes of water are combined in a lotion; and a sponge imbued with this fluid is placed before the patient's mouth for five or ten minutes every hour.

Bromide of Iron is employed by some in cases of spermatorrhœa and involuntary seminal emissions, in doses of fifteen to twenty-five centigrammes occasionally; and, before the patient goes to sleep, in a dose of fifty centigrammes.

Bromide of Potassium has recently been used in cases of the sickness of pregnancy, and in cases of leucorrhœa, effecting cure in less than two months in the latter case. It is useful in summer diarrhœa in infants, in doses of three centigrammes every two hours.

Bromide of Sodium has a similar efficacy to that of bromide of potassium in epilepsy, and proved a cure in one case of tetanus.

Conium has been used successfully in cases of mania, accompanied by muscular agitation. It acts on the motor centre, sparing the sensory tracts. Of twenty-five patients treated by this substance, twenty-two times the muscular agitation subsided.

Hydrate of Chloral has been used in cases of nocturnal incontinence.

Chloride of Potassium has been used instead of bromide in epilepsy, and it is asserted to be more efficacious. Dose, 3-50 grammes to 5 grammes a day.

Copaiba has been recommended in certain cases of psoriasis.

Iodine has been recommended in cases of nocturnal incontinence of the aged; one drop of the tincture every hour in water. The tincture has also been recommended in doses of ten drops in intermittent fever thrice daily.

Iodoform is used in chronic venereal ulcers, and much praised as an antiseptic.

Phosphorus in oil has been recommended in chronic skin diseases; or gelatine capsules containing each from two to six milligrammes of phosphorus in oil. Acue indurata, lupus, psoriasis, and scrofulous skin diseases have been cured by such means. —*Exchange.*

Infant Feeding.—M. Joulin, in a witty article on the subject, insists strongly on the necessity of feeding children under six months of age exclusively on undiluted, or, as he calls it, "unbaptized" milk. He abhors all kinds of additions and admixtures, whether of water or of so-called "foods." He thinks infants should have "living," that is, recently drawn milk, and he terms "dead" that which has long been removed from the animal yielding it. He enumerates, and wittily ridicules the many preparations which are offered for the English baby, "each more patented and more marvelous than the other," and adds, "In the midst of all these riches, the young children of Old England run no risk of dying of hunger, but of indigestion. To these products of art I prefer—milk."—*Gazette de Joulin.*

Foreign Bodies in the Female Urethra.—During the past four years, says Mr. Stokes, there have been, by a singular coïncidence, four cases in my hands of foreign bodies in the female urethra, these being, in all the cases, hair-pins. Their extraction, when the curved end of the hair-pin is first seen or felt by the surgeon, can generally be accomplished with facility; but when, as is usually the case, one or both points of the hair-pin are first met with, the reverse is the case. The extraction is then accompanied with very great difficulty, especially when one of the points of the hair-pin has penetrated the mucous

membrane of the canal, and passed deeply into the surrounding tissues. When this occurs, it is hard to lay down any precise rules as to the method the surgeon should adopt to extract them; but, generally, I have found the best plan to adopt is to lay hold of any visible portion of the hair-pin with a long-handled forceps, and to force it backwards towards the bladder until one or both points of the foreign body become visible. When these appear, they should be seized by an assistant with other forceps, and then extracted. But when, as sometimes happen, the hair-pin becomes much bent and altered from its original form, this manœuvre is not possible, and it must then be left to the discretion of the surgeon to adopt whatever plan hi sown ingenuity may suggest.

Of the cases above alluded to, the most remarkable was one that was under observation in June, 1869. The chief peculiarities of the case arose from the length of time the foreign body must have been lodged in the urethra or bladder, and the enormous deposit that was found upon it. In this case, my belief is that the pin was originally inserted with the curved end towards the bladder, that it passed up into that viscus, and remained there sufficiently long for it to become so extensively encrusted as it was, and that eventually it made its way out with the curved end foremost, until, at the orifice of the urethra, it became impacted and caused retention of urine.—*Dublin Med. Journal.*

Imperforate Anus.—M. Verneuil communicated his views on this subject to the Surgical Scciety of Paris, with an account of six cases, five boys and one girl, with two successes. M. Verneuil advocates excision of the coccyx, which, he says, enables the operator to search more easily, and to find more readily the blind pouch, or ampulla of the rectum. Although not absolutely necessary, M. Verneuil says, resection of the coccyx not only facilitates the operation, but also the application of sutures to the intestine and skin.—*Journal de Medicine.*

An Improvement on Esmarch's Elastic Bandage—*W. Har-*

rison Cripps, Home Surgeon at St. Bartholomew's Hospital, London, England.—Esmarch's admirable suggestion of using an elastic bandage to exclude the blood before operating on limbs, and the complete success attending it, are now probably well known. The following is a simple modification of his arrangement, by which many yards of elastic bandage may be dispensed with, and it can be easily and quickly applied.

A short India-rubber tube is used, not only to prevent the blood from returning to the limb, but also for the purpose of removing it in the first place. The two ends of an India-rubber tube, twenty-one inches in length, and about three-eighths of an inch thick, are bound together with a piece of twine, the whole forming an elastic ring seven inches in diameter. A grooved reel revolving between a double handle completes the necesary apparatus.

To apply this to the arm, three or four complete turns of the elastic ring are wound tightly round the hand in such a manner as to include the fingers and thumb, care being taken that the turns lie even, and not across one another. The reel is then put under the free portion of the ring connecting the upper and lower coil. The reel is passed round and round the limb in an upward direction; thus each coil is unwound from below as another is added above. In this way four tight coils of India-rubber are carried up the limb to any distance required. The degree of tightness can be regulated with the greatest nicety by the distance the reel is drawn from the limb by the bandager.

This method of driving blood from the limb answers perfectly in the arm, and in the lower part of the leg; but in carrying the bandage over the popliteal space, the flexor tendons prevent the artery being effectually compressed. A firm pad in the space would probably answer the purpose.

To remove the bandage, it may either be unrolled by reversing the action of the reel, or the twine connecting its two ends may be cut with scissors.—*Exchange.*

Case of Retracted Nipples.—M. N., aged twenty; unmarried;

delivered of her first child on the 30th September, 1873, in the Edinburgh Royal Maternity Hospital, under the care of Dr. Mathews Duncan. Patient is strong, healthy-looking, well-developed, brunette, with brown hair and eyes, and corresponding complexion. The usual pigmentary deposits on various parts of the body, except those to be described, well marked. For example, the dark line running from the lower border of the umbilicus to the symphysis pubis is readily made out. From the ill-developed, retracted state of the nipples, she is unable to suckle her infant. Both mammæ are distended by lactiferous engorgement and secrete milk copiously. The areolæ are of a rose color; they measure one and a third inch in breadth respectively. Corresponding to the ordinary seat of the nipple is a depression, in the centre of which is situated a nipple about the size of that of a child. There are none of the ordinary characteristic pigment deposits in either areola or nipple.

Remarks.—In this girl the areolæ are in coloration like those of an albino, but they are in addition not well marked, and cover a comparatively small area. These conditions are only points in the altogether undeveloped state of this part of the mamma. The nipple scarcely projects and is small. Retracted nipple from cicatricial bands is not uncommon; but the most frequent form of the affection is that produced, mostly in primiparæ, by fullness or lactiferous engorgement of the gland. The kind described in this case is far from rare. It generally leads to great trouble in getting the baby to suck properly, and to great suffering from fissures or ulceration; but it is not incompatible with the qualifications of a good wet nurse.—*Obstet. Journal.*

The Bloodless Operation.—Esmarch thus describes this method of performing the bloodless operation: "While the patient is being chloroformed, we wrap the leg in waterproof varnished tissue-paper, so that the pus from the sinuses may not soil the bandages; then, with three elastic bandages, made of India-rubber webbing, we envelop each leg from the tip of the

toes to above the knee, and, by equal compression, force the blood out of the vessels of the limb. Immediately above the knee, where the bandage ends, we apply this piece of India-rubber tubing four or five times round the thigh, drawing it very tight, and fastening the hooks which you see at one end to the brass ring at the other. The India-rubber tubing compresses all the soft parts, including the arteries, so completely that not a drop of blood can pass into the part which has been tied off. It has this advantage over all tourniquets, that you can apply it to any part of the limb, and need not give yourself any trouble about the position of the principal artery. Even in the most muscular and fattest individuals, you can perfectly control the flow of blood in this simple way.

"We now remove the India-rubber bandage which was first applied, and the varnished paper lying under it; and you see that both legs, below the compressing tube, perfectly resemble the legs of a corpse, presenting in their pale color an almost dismal contrast with the rosy hue of the remaining parts of the surface. You will see, too, that the operation will be in all respects like one on a dead body."—*Exchange.*

Compliment to a Young Doctor.—John Murray, M. D. and C. M., Aberdeen; M. R. C. P. and M. R. C. S., London; Assistant Physician to the Middlesex Hospital and to the Hospital for Sick Children; Dean to the Middlesex Hospital School of Medicine; Sub-editor of the British Medical Journal, etc., etc. Twenty-nine years of age, and in full vigor of life, enthusiastic, enterprising, laborious, talented, rich in experience, honest, unselfish, considerate, kind, and in body and mind most lovable. All these and many more excellent qualities were conspicuous in Dr. John Murray, yet, in a moment, we are ruthlessly robbed of the whole. It is as if some fair edifice carefully constructed and beautified had at the time when it was about to be of the greatest use and comfort been dashed down suddenly. Irreparable ruin alone is left to us, and memory now can only look back upon its fair proportions and imagination picture what it

might have been. Has this sad catastrophe no moral? Have we not reason to fear that another has fallen, as a contemporary states, a "victim to the horrible struggle of a London life?" Too many before him have been sacrificed to the perilous high-pressure speed of the present time, for us not to know full well the pernicious effect of overwork and its fatal results. Let those, then, whose ambition is unbounded, spirit undaunted, and energy still unflagging, take warning, and remember that although their constitutions may be sound and long-suffering, the inflexibly severe Nemesis will, if they unduly strain their power, most inevitably appear to punish their disobedience of nature's laws.—*Obstetrical Journal.*

The consumption of horse flesh is rapidly increasing in Vienna. In the quarter ending October 1st, 608 horses were slaughtered and converted into food.—*Lancet.*

CLINICAL RECORDS.

"Ex principiis, nascitur probabilitas: ex factis, vero veritas."

ART. I.—TREATMENT OF CORPOREAL ENDOMETRITIS BY APPLICATIONS OF CHROMIC ACID TO THE INTRA-UTERINE MUCOUS MEMBRANE. By D. W. PRENTISS, M. D., Washington, D. C.

CASE I.—Mrs. B., aged thirty-seven years; native of the United States; lymphatic temperament, but healthy; mother of five children. A fœtus of six months' development died *in utero* on the 17th of March, 1870. Labor was induced by sponge-tents on the 9th of July—more than three months and a half later—and the product of conception delivered consisting of a well-developed six months' fœtus unchanged by decomposition. Fearful hæmorrhage immediately followed and continued for four hours, bringing the patient down to death's door. The remedies used were ergot freely, arom. sulph. acid,

whiskey, and laudanum, cold cloths to vulva and abdomen, and ice externally and packed in vagina. The latter remedy controlled the bleeding. Subsequently, milk-punch and beef-tea were administered freely.

The patient made a very tardy recovery, if recovery it could be called. During the month following the delivery, hæmorrhage recurred frequently, being checked by cold cloths and a mixture of fl. extract of ergot and arom. sulph. acid, equal parts, of which twenty drops were given every two, three, or four hours, *pro re nata*.

August 6th.—A uterine examination was made, which disclosed complete retroversion and a very patulous os in a condition of velvety granulations. The mouth and neck of the womb were sufficiently open to admit easily of the introduction of the index finger. The uterine sound passed into its cavity five and a half inches, giving sharp pain when it touched the fundus, and was tinged with blood on its withdrawal. Endometritis with subinvolution diagnosed.

A solution of chromic acid, one hundred grains to the ounce of water, was applied to the whole of the uterine cavity by means of a wad of cotton on the end of a sound. This was followed by a similar application of glycerine, and a glycerine pad applied against the os. This application was renewed at intervals of fourteen days for the subsequent two months, with the following result:

October 7th.—The uterine sound indicates two and three-quarter inches; no tenderness on its introduction, nor pain given in replacing the retroverted organ with the sound, which can be readily done; granulations on the os disappeared. Patient able to be about her room and feeling well, excepting the discomfort due to the displacement. The hæmorrhage did not return after the first application of the caustic until three weeks had elapsed, when it was considered catamenial, and although profuse, abated without other interference than rest and cold applications. The second catamenial period passed without unusual flow.

The retroversion still remained to be remedied, but not considering it safe to use a pessary so soon after an inflammation, I recommended the patient to wait until the womb might regain its wonted tolerance.

March 2d, 1871.—After an interval of five months since last record, during which time there was no return of the inflammation, I ventured to try artificial support to hold the displaced uterus in its place. The retroverted womb was restored to its position without difficulty, the patient being on her knees and shoulder, and one of Hodge's closed lever pessaries applied. It seemed to be well adapted to the case, and gave no pain at the time.

March 4th.—Saw the patient again, and to my surprise found her in bed. The pessary had caused such great pain that she had been obliged to remove it the same evening of its application. The following morning there was uterine hæmorrhage with other attendants of uterine irritation. The speculum revealed a congested os, and the sound showed great intra-uterine tenderness. Rest was prescribed, with glycerine and tanninpad.

March 16th.—The hæmorrhage still continuing, with but little abatement of general uneasiness, the chromic acid solution was again applied.

March 17th.—The metorrhagia entirely ceased, with great improvement in all the symptoms.

The points of interest in this case are as follows: 1st. The cause of the inflammation. This, I think, was undoubtedly due to the very exhaustive hæmorrhage, which acted in two ways; *primarily*, by direct draining of the uterine walls, exsanguinating its muscular structure, and thus preventing contraction; and *secondarily*, by its effect upon the general system. The combined result was imperfect involution of the uterus, which terminated in chronic inflammation.

The second point of interest is the treatment. The endometritis was treated solely by local application of the chromic acid solution, and a marked benefit could be seen following each application.

Third, the unfortunate result of the attempt to relieve the retroversion by the use of a pessary. I consider that the endometritis had been relieved, as far as was possible, while the displacement existed, and I had waited five months for sensitiveness to subside before making any attempt to relieve the displacement by instrumental means.

CASE II.—February 7th, 1871, I was called to see Miss B., aged seventeen years, a stout, healthy-looking girl, but almost without color, which, however, was not so noticeable, she being a perfect blonde. Her history indicated that uterine trouble had existed for two years and a half; in fact, from the time that menstruation had begun. She had always been irregular in her monthly periods, the discharge being too profuse at all times, and sometimes amounting to flooding. The interval between the return of the periods has been very varying—rarely more than a month—most frequently returning every two or three weeks, and occasionally the flow would be continuous for several weeks.

It was during an occurrence of this sort that I was consulted in reference to her last summer, when, as she refused to permit an examination, a prescription of ergot and bromide of potassium was ordered to be taken three times a day for several weeks. Under this treatment there was no return of the hæmorrhage for eight weeks, when it again recurred with all its former violence. The same remedy was administered without avail, or at least with only partial benefit. I refused to treat the case further without making a uterine examination, and the same condition of things continued until February 7th, 1871, when she consented to the examination. I found a granular condition of the mucous membrane, but very little enlargement of the os. The hæmorrhage being very profuse at the time, nothing could be seen of any other discharge. On introducing the sound, I was quite shocked at the distance to which it disappeared, and was at first fearful that it might have entered an enlarged Fallopian tube. A careful exploration, however, showed this not to be the case, and measurement of the sound

indicated four and a half inches to be the depth of the uterus. A sponge-tent was introduced, and fl. ex. ergot and arom. sulphuric acid given in twenty drop-doses every two hours.

February 8th.—Tent removed and another of larger size introduced. Hæmorrhage still remains unchecked. Acid and ergot continued.

February 9th.—Tent again removed and one still larger used. Condition the same.

February 10th.—Tent removed and careful exploration of the uterine cavity made with the sound, and, as far as I could reach, with the finger. I was fully prepared to find a polypus—from the persistent hæmorrhages and greatly increased size of the womb, but found instead a granular condition of the mucous membrane, the granulations irregular in size, large, distinctly rounded, and having a certain degree of firmness; the cavity of the womb was as large as it should be at five or six weeks of gestation.

Made an application of a solution of chromic acid (100 grs. to ℥i.) to the intra-uterine surface, and inserted glycerine pad. No pain followed the application, and the hæmorrhage, which had continued up to this time, was checked immediately.

February 11th.—Patient comfortable without pain or uneasiness of any sort. No return of hæmorrhage. Glycerine pad renewed.

February 12th.—Bleeding returned during the night, but not profusely. Introduced a wad of cotton saturated with a solution of tannin and glycerine into the womb.

February 13th.—No loss of blood after application of yesterday.

From this date until March 1st visited the patient frequently, but did not interfere with the womb. She was allowed to be up, but cautioned against any kind of exercise that might cause uterine irritation.

March 1st.—Uterus measures three and a half inches. After an interval of sixteen days, hæmorrhage again appeared, but as it was moderate and commenced after the manner of the men-

strual flow, I did not attempt to check it until it had continued six days, when it was so profuse as to demand interference.

March 7th.—Cavity of uterus measures four inches, a decrease of half an inch since last measurement.

A sponge-tent was introduced, reaching nearly to the fundus.

March 8th.—Tent removed. Hæmorrhage still unchecked. Solution of chromic acid applied as before. As before, the flow of blood was immediately arrested.

Same after-treatment of tannin and glycerine ordered.

March 20th.—Since last record, patient has been entirely free from uterine distress of any kind.

Cavity of uterus measures three inches, and shows no tenderness on introduction of sound. Chromic acid again applied, and same after-treatment continued.

March 25th.—The patient is still considered under treatment, but the very marked improvement makes it almost certain that a few more applications of caustic will reduce the womb to its natural size, and we may then pronounce the patient cured.

[This patient was subsequently discharged, womb measuring two and three-fourths inches, menstruating regularly and naturally, and apparently in perfect health.]

In connection with these two cases, I wish to call attention especially to the use of chromic acid as a remedial agent in Chronic Corporeal Endometritis.

All of us are aware of its great efficacy in cervical endometritis, and of its superiority to nitrate of silver as a local remedy in this disease. I have frequently seen cases of the latter affection relieved entirely by a single application. In treating Corporeal Endometritis, it is important that the cervix should be thoroughly dilated, so that the application can be made to all parts of the cavity without being wiped off the sound in the neck.

In Case I. the size of the uterus was reduced from five and a half to two and three-quarter inches in two months, with corresponding improvement in general symptoms.

In the latter case, the depth of the womb was reduced from four and a half inches to three inches in less than six weeks, and in six weeks more to two and three-quarter inches.

This case I consider the more interesting of the two, on account of the age of the patient, the very marked granular condition of the intra-uterine mucous membrane, and from its long standing. That the cavity of the womb was readily reduced in size in a case where the disease was due to subinvolution, is not perhaps remarkable. But where the affection was of three years' standing in a young virgin, we would naturally expect some delay in the recovery.

In conclusion, I will state that I had thought at first of presenting two other cases treated by the same method, but as they were both complicated with other uterine trouble, the result of the chromic acid treatment is thus far negative.

ART. II.—TWO CASES OF SYPHILIS. By THOMAS J. TURPIN, M. D., Forkland, Greene County, Ala.

CASE I.—Jim Early, negro man, aged forty years, contracted syphilis three months before applying to me for treatment. On examination, I found two large chancres situated on the scrotum, and one on the exterior of the prepuce. There was congenital phymosis, and forcing back the prepuce as far as I was able, I perceived a large chancre covering the mucous membrane. There were several buboes in each groin. He complained also of sore throat, and the lymphatic glands of the neck were enlarged. The prepuce was inflamed and swollen, constricting the glans penis, and rendering micturition difficult and painful. I chloroformed the patient and slit up the prepuce, revealing a large patch of ulceration of the mucous membrane, and a very small glans, in size utterly out of proportion to the rest of the organ. I removed a sufficient por-

tion of the indurated prepuce and cauterized the chancres. I prescribed as an alterative—

℞.—Potassi Iodidi, ʒj.;
Hydrargyri Chloridi Corrosivi, gr. vj.;
Aquæ, f. ʒvij. Mix.

Take a teaspoonful three times a day until the system is well under its influence. Gradually increase the dose, so that after twenty or thirty days one-quarter of a grain of corrosive sublimate is taken three times daily.

This formula is Hammond's, and is taken from "Naphey's Therapeutics." I used locally to the chancres—

℞.—Ferri et Potassæ Tartratis, ʒij.;
Aquæ, f. ʒviij. Mix.

Apply on lint.

Five days after the patient came back to me badly salivated. He had been taking the medicine in tablespoonful-doses, thus taking at one dose as much as I had intended he should in four. He had considerable fever, and the throat was so sore and the stomach so irritable as almost to prevent the patient from taking food. I ordered the medicine to be discontinued, until the ptyalism and other symptoms subsided, and then resumed it with complete success, so far as the disappearance of the syphilitic symptoms were concerned.

CASE II.—Israel Tucker, negro man, aged thirty-six years, applied to me June 7th, 1872, for treatment for constitutional syphilis. Excepting that he had no phymosis, his symptoms were substantially the same as in the case just described. I made use of the same plan of treatment, with a like happy result, the patient reporting to me at the end of six weeks with none of the symptoms remaining. This mode of combining the bichloride of mercury and the iodide of potassium, I think a very excellent one. I could report a good many other cases of syphilis cured by its use, but select these two as illustrating sufficiently the marked and rapid benefit resulting from its exhibition.

ART. III.— ECTOPIA. By C. S. FENNER, M. D., Louisville, Ky.

In March last, Miss B., a young lady sixteen years of age, came to my office, accompanied by her father, to consult me in regard to her eyes. She stated that her vision had been defective from infancy, and that she thought herself very near-sighted; had visited several opticians, with a view of selecting glasses that would improve her vision, but had failed to find any that benefited her. On examining her eyes, I found the refractive media clear and the pupils freely movable to the stimulus of light, but on sudden movements of the head or eyes, there was a tremulous motion of the irides. She read No. 20 Snellen with the right eye at thirty inches ($V = \frac{2\frac{1}{2}}{20}$); with the left, at 24 inches, ($V = \frac{2}{20}$). With the right eye she was unable at any distance to make out letters smaller than No. 6 Snellen test types, but with the left, by partially closing the lids, and having both the eye and the book well illuminated, she read the finest print (No. 11 Jager) by holding it at the distance of a little less than two inches, but the effort long continued gave her supra-orbital pain. On dilating the pupils with atropia, the crystalline lens of both eyes were found to be displaced from their normal position; the right one upwards, and the left upwards and outwards, so that the inferior border of each lens was about a line above the margins of the dilated pupils; the former presenting, on ophthalmoscopic examination, a dark, crescent-shaped border, beneath which and the pupilary edges of the irides, the optic disks and the vessels of the retina were plainly seen. They were also seen but less distinctly through the lenses. When the pupils were contracted all of the rays of light passed through the lenses below their axes. Concave glasses made her vision worse, but with a convex lens ($\frac{1}{7}$) held before her right eye, No. 20 Snellen was read at 8 feet, beyond which no improvement could be made. She was unable to read with this eye fine print at any distance. The left eye was astigmatic, and required a spher-

ico-cylindrical lens $+\frac{1}{14}$ S $\supset +\frac{1}{14}$ C, axis vertical. With this glass she could read No. 20 at 8 feet, and the finest print for a long time, held 3 inches from the eye, without fatigue. Although the optic axes were parallel when looking at distant objects, there was no binocular vision; the left eye alone being used to see small objects, and the right for distant vision. I prescribed for her right eye a convex glass ($\frac{1}{7}$) to be held before it when she wished to get a more distinct view of a distant object, and for reading or doing fine work, the spherico-cylindrical lens above mentioned for the left eye.

Ectopia is frequently hereditary, and always congenital. Dr. Knapp recently informed me that he once saw five children of same parents with congenital ectopia. Donders speaks of having met with three cases which belonged to the same family. Both of the parents and a brother of this young lady had normal eyes. In ectopia there is a tendency to the formation of laminated cataract, probably from defective nutrition. I am inclined to think that this result is rather desirable; for then there could be no objection to the removal of the cataracts, when the eyes would be left in a condition of absolute hypermetropia, which could be in a great measure neutralized by proper convex glasses.

ORIGINAL CORRESPONDENCE.

"Sit mihi Fas scribere audita."

BALTIMORE, MD., December, 1873.

HOW TO TREAT SOME CASES OF THROAT DEAFNESS. By JULIAN J. CHISOLM, M. D., Professor of Eye and Ear Diseases in the University of Maryland, and Surgeon in Charge of the Baltimore Eye and Ear Institute.

Dr. Gaillard:

Dear Sir,—The great value of the specialties in the Medical

Profession should not reside solely in the more perfect understanding of the many diseases to which the various portions of the body are liable; nor in the greater skill which those acquire who are enabled, as their daily occupation, to concentrate attention to the diseases of particular organs. Through this individual proficiency the community are benefited, or at least such members of it as can secure the services of skilled specialists. To the very large number, however, who can not be brought under such immediate observation and treatment, this progress in special medicine would be of no avail, unless the general practitioner be instructed by the specialist, so that he may be enabled to apply some of the valuable expedients, the use of which bears such abundant fruit. It is not to be expected that the general practitioner, who sees the diseases of individual organs only now and then, often only at long intervals, can acquire that knowledge of special diseases, that accuracy of diagnosis, and that skillful application of instruments which the specialist secures by his every-day work; but there is no reason why he should not be prepared to treat successfully numerous patients who so often suffer from the lack of a little knowledge on the part of their family physician.

The necessity for such instruction was forced upon my observation quite recently, when a physician of high standing and extended reputation brought to me for treatment from his distant home his daughter, suffering from deafness. She could hear conversations very indifferently, and could only hear the ticking of a watch when pressed upon the ear of either side. The defective hearing had been attributed to an attack of scarlet fever two years since, and there had been at one time a slight discharge from the ear. The Doctor had repeatedly used the familiar remedy of syringing the ear with warm soapsuds, with no benefit. Being anxious to avoid any cause of suffering in his child, he had abstained from applying the blister behind the ears, which two remedies form the armamentarium of most general practitioners for the treatment of aural diseases.

Upon inspection, I found no disease of the external meatus. The drum membrane was normal in appearance, but in position was somewhat sunken, from external atmospheric pressure, while not receiving its proper support from within. The cavity of the drum was not sufficiently supplied with air through the Eustachian tube from its throat entrance, and therefore allowed the drum-head to be pushed inwards. There was no inflammation of the drum membrane to be relieved by the blister, nor was there any extraneous matter to be removed by the syringe. Both remedies would have been, as they are in the majority of cases in which they are used, gratuitous and useless.

The indications for treatment in this case were already defined, and the sequel proved the propriety of their application. The drum cavity required air in quantity sufficient to replace the drum membrane in the natural position, so as to enable it to receive and transmit vibrations to the inner ear, where the nerves of hearing were in good condition to be acted upon.

There is but one natural means of filling the drum cavity—viz., by ingress of air by the throat through the Eustachian tubes. Nature keeps a reservoir of hot air in the throat for this purpose. When the Eustachian tubes are in good working condition, the act of swallowing pulls the flattened walls of the tube apart, and permits the needed air to enter. When the machinery works well every act of swallowing represents the opening of the valves for the admission of air. The air in the drum cavity requires to be constantly replenished.

In the case in question, there was some mechanical obstacle to the admission of air through the Eustachian tube, which the act of swallowing alone could not overcome. This was the sole cause of the deafness. The only treatment required, therefore, was to remove this obstacle. *To effect this, the remedies were to be applied through the throat*, and not by means of the outer ear. The mode of procedure was simple, and applied as follows: The nozzle of a large rubber-bag syringe, called a Politzer air-bag, was introduced within the nostril of the child

and by squeezing the nose it was held firmly in position. The child was then requested to swallow, and simultaneously with the swallowing act the bag-syringe was suddenly squeezed. Its air contents, as an air blast, was driven through the nostril into the throat, forcing its way through the Eustachian tubes and into the drum cavity. In an instant the child's hearing was perfectly restored, a miraculous cure in the eyes of the astonished and grateful parent.

It often happens in the experience of the aural surgeon to have patients brought to him from several hundred miles, and at much expense, to have this simple operation performed. The family physician should have been prepared to have undertaken this operation at home. It is with the hope that I may throw out a few useful hints to this valuable class of medical men that I am induced to prepare the following article:

There is no more common disease than a cold; and one of the very common effects of a cold (so called) in the head, is deafness, more or less marked, and more or less persistent. In fact, it is this inflammation of the lining membrane of the nose continued into the upper part of the throat which, by its extension into the Eustachian tubes and through them into the middle cavity of the ear, is so fruitful a cause of deafness. One of the most frequent troubles to which the human organization is liable, is defective hearing. It is computed, that of the entire population who have attained the age of forty, one-third are more or less deaf, and nine-tenths of these have been made hard of hearing by inflammation extending from the throat. Hence, one of the common diseases of the world is deafness, and the common form of deafness is throat deafness, *aural catarrh* in some one of its many phases.

However energetically the ears of such deaf persons may be syringed, regardless of the medicated qualities of the fluid used, even when well supported by frequent vesication of the mastoid region, the deafness progressively increases, as if the treatment had been totally neglected; *as it in reality is.* In ordinary cases of deafness these applications are entirely out of

place, and can effect nothing beyond the mental sedation to physician and patient of doing something. Such applications are inert for good, are often painful, and are therefore worse than useless.

As a rule, the syringe with warm water, whether simple or medicated, is applicable to only two conditions in aural surgery. It is a highly proper remedy in cases of aural discharge, also in cases in which foreign bodies have been introduced into the ear, or in which the external meatus becomes impacted with wax. By wax accumulations, I mean the external passage from the drum membrane is completely blocked up by wax secretions. This prevents vibrations of the atmosphere from coming in contact with and exciting similar vibrations on the drum, which in turn transmits the same to the nerves of hearing, the brain interpreting the impressions upon the nerves as sounds and hearing. The mere presence of wax in the ear, a perfectly normal condition, is no indication for the use of the syringe. Even if the walls be thickly coated, and the calibre of the cylinder much encroached upon, as long as the external air has ingress to the outer surface of the drum membrane, however narrow the passage, hearing continues good, and the syringe is not wanted.

There is no excuse for needlessly syringing the ear. Discharges from the meatus intrude themselves too readily upon the sight and upon the olfactories, and wax impactions can be easily seen by examining the ear. Take the patient to a window into which the sun is shining; by bending the head and drawing the tip of the ear upwards, backwards, and outwards, the ear passage, which nature has made designedly curved, will be made straight, so that a beam of sunlight falling into the ear will bring plainly into view the very drum membrane itself. Of course, anything that lies in front of it to conceal it from view must also be readily exposed. If the drum membrane be shut out by an impacted plug of wax, the object will be clearly observed.

As to the uses of the syringe in aural surgery, I shall take

some future occasion to explain them. At present I will only state that *syringing is not required* if deafness depends upon any other cause than the two causes above given.

When persons find their hearing power diminished while suffering from a cold, the hearing being quite restored or nearly so when the cold passes off, to be again affected when symptoms of cold in the head show themselves anew, the cause of deafness may, with safety, be attributed to some obstruction in the passage of air into the drum cavity. The existence of the Eustachian tubes, the only means for introducing air into the drum cavity, is altogether overlooked by most physicians. These tubes play as important a part in the physiology of hearing as do the outer tubes, which are so much more conspicuously placed. When the finger is thrust into the ear, hearing is temporarily suppressed. To a similar extent is deafness produced should there be accidental obstruction to the throat opening of the ear. If through thickening of the mucous membrane lining the Eustachian tubes, or the collection of tenacious mucus in the tubes, the ingress of air through the passages be altogether cut off, then the deafness becomes absolute.

The Eustachian tube is usually described as a trumpet-mouthed passage, the large end of the funnel opening into the throat, the contracted portion opening into the drum cavity. The tube is about one and a half inches in length, the inner third being a bony passage tunneled—the substance of the petrous portion of the temporal bone, and therefore fixed. The outer two-thirds of the passage towards the throat entrance has cartilaginous walls, and are more or less movable. The mucous membrane which lines the nose and the throat is continued through these Eustachian tubes into the middle ear, and although it is modified in structure to meet the functional demands of its varied location, it yet presents the same continued surface. On this account, we find all of it susceptible to similar pathological impressions, and liable to temporary congestion or to permanent thickening, as a consequence of inflammation. The mucus secreted by the surface is also mod-

ified both as to quantity and viscidity by inflammatory action.

The only natural outlet for mucus secreted in the drum cavity and mastoid cells is by way of the Eustachian tube into the throat. The drum cavity can only perform properly its functions when full of air. Should there be any undue secretion of mucus in the cavity, it must interfere more or less with the undulations of the air therein contained. Moreover, should any excessive secretion of mucus remain, unemptied from the drum cavity, it may collect around and concrete upon the chain of delicate bones (maleus, incus, and stapes), which extend across the cavity from the inner face of the drum membrane and the oval opening in the Labarynth or nerve box. This would clog the delicate movements of this compound angular lever, and, by stiffening the little joints, materially affect the degree of pressure of the foot of the stapes upon the fluid contained in the Labarynth. More or less deafness, with buzzing or roaring in the head would be the result of this pressure.

In the deafness resulting from cold in the head, properly called catarrhal deafness, there are many pathological conditions, represented by the degree of extension of inflammatory troubles along the Eustachian tube. In one class of cases the inflammatory complication inducing deafness locates itself at the very mouth of the trumpet, and although confining itself altogether to the very surface of the throat, closes the mouth of the tube. In another class of cases, the inflammatory swelling of the mucous membrane invades the tube to a greater or less depth, encroaching upon its calibre and interfering with the ingress of air into the drum cavity. In a third class of cases, the inflammation traverses the entire tube and invades the cavity of the drum.

The capacity of this drum cavity is very limited, a few drops of fluid will fill it. Three grades of inflammatory action may show itself within this very important little space. There may be simply a hypo-secretion of mucus fluid, which, owing to the closure of the Eustachian tube by swelling of its lining membrane, can not escape through this natural channel. For such

a condition of deafness, with the tympanic membrane bulged out by overdistention of the cavity, I have punctured the drum membrane for the purpose of forcing out the mucus fluid through the puncture, and in this way emptying the cavity. Hearing was immediately restored by this operation. In a second class of cases, active proliferation of some of the elements of the lining membrane seems to take place. When these granulation masses in time shrink, they leave the lining membrane in a permanently disorganized condition. Opposing surfaces are tied together by adhesive bands, and often anchylosis of some of the little joints results; possibly the foot of the stapes may be firmly fastened to the labarynthine orifice. In a third class of cases, suppurative inflammation is excited. The cavity of the drum fills with pus; accompanied by severe earache. The drum membrane is injected, and becomes red and thick. Gradually the membrane softens, then yields to the distending pent up fluid, and finally gives way, a gush of pus from the external meatus indicating the character of the lesion.

Fortunately for the preservation of the sense of hearing, catarrhal deafness usually commences as a surface trouble in the upper pharynx, and is very amenable to simple treatment if applied to the throat.

When a human head is separated from the body and divided by vertical saw cut so as to expose the nose, mouth and pharyngeal cavities, an elongated opening will be found in the middle of the lateral side of the pharynx, more or less concealed between two natural folds of the mucus lining of the throat. When the relations of this opening are observed, its position will be found nearly midway between the base of the pendulous palate and the posterior wall of the throat, a little above the level of the floor of the nose, and on a line with the posterior extremity of the inferior turbinated bone. This split-like, gaping orifice, which has its longest diameter in the vertical axis of the pharynx, is the flattened, funnel-shaped mouth of the Eustachian tube, which tube tunnels for itself a passage one inch and a half long, so as to reach the middle ear.

The pharyngeal opening of the tube being formed of soft tissues, has its opposing walls in contact, and therefore a closed mouth to the tube is its normal condition. These soft, collapsed walls may be readily drawn away from each other through the aid of muscles. In the act of swallowing, which necessitates active movements in the pendulous palate, the walls of the pharyngeal opening of the Eustachian tube are drawn widely asunder for the ready passage of air to the drum cavity. This is Nature's method for supplying the middle ear with air.

When imflammation thickens temporarily the mucous membrane lining the nose, so that air can no longer pass along its accustomed channel, the patient refers to his nose as stopped up, and he breathes through his mouth. The same membrane, continuous from the nose into the upper part of the throat, may be in like manner affected by the inflammation under such a condition. The throat lining becomes thick from swelling, and as the membrane, needing more room, is thrown into folds, the slit-like opening of the Eustachian tube becomes, as it were, buried between them. Deafness ensues from this mechanical closure, to which may be added some accumulation of mucus in the calibre of the tube. The act of swallowing no longer opens the mouth of the Eustachian tube for the admission of air, nor does it dislodge the mucus plug. As air does not enter the tympanic cavity, the drum membrane does not receive due support from its inner side; it is therefore squeezed inwards from external atmospheric pressure, carrying with it the chain of small bones. The foot of the stapes is in this way pressed upon the Labarynth, in which the nerves of hearing are arranged, and such irritating pressure excites more or less buzzing, a common symptom in catarrhal deafness.

Often in the midst of this annoying deafness, an effort at yawning or a violent blowing of the nose is accompanied by a sudden cracking noise in the ear, with immediate relief of the symptoms and temporary restoration of hearing. An explanation is found for this sudden relief in the fact, that in moving

the palate or in filling the pharyngeal cavity with air from the lungs, in the act of blowing the nose, the mouth of the Eustachian orifice is forcibly opened. The pent up air compressed in the throat breaks through the mucus obstruction with a cracking sound, and forces its way into the drum cavity.

The observing surgeon takes advantage of this experience, for the relief of deafness, and tries to make this forcible entrance of air at will. This he effects in one of three ways. The first, a natural, simple, easy and ready method, is called Valsalva's method. It is based upon the fact that a violent blowing of the nose in cases of deafness, accompanied by cold in the head, will frequently restore hearing, after a sound of an explosion is heard in the ear.

To carry out this simple method, the patient is told to hold his nose and take a full inspiration through the mouth. The mouth is then closed also, and an effort is made to expel the air from the chest. The cheeks puff out in the effort, and a similar expansion of the pharyngeal cavity ensues. Under this pressure the weakest point of the throat cavity often gives way, and air pours through the Eustachian passage into the middle ear. Immediately the drum membrane is forced outwards into its proper position, where it is equally supported from both sides. Pressure of the foot of the stapes is removed from the Labarynth, and hearing is restored.

This condition is, however, not necessarily a permanent one. The air will soon disappear from the drum cavity, with a recurrence of the deafness, unless the supply of air be from time to time renewed. In the normal working of the hearing apparatus, whenever the air pressure is getting too low in the drum cavity, a desire to swallow the accumulating saliva occurs. During the necessary action of the muscles of the throat in swallowing, the mouth of the Eustachian tube is opened, and the requisite amount of air is admitted. With the swollen condition of the lining membrane of the tube orifice, the ordinary movements of the palate muscles do not suffice to open the tubes, and the extra effort of forcible inflation, as just described,

becomes necessary. By a frequent repetition of this method, which Valsalva introduced to the notice of the Profession, the drum can be supplied with air, and the deafness can be kept in abeyance until the symptoms of cold in the head subside. With the subsidence of swelling in the lining membrane, the natural method of air supply is reëstablished.

When the obstacle to the introduction of air is greater, this method of self-inflation is not sufficiently powerful to overcome the mechanical closure of the Eustachian tube, and another device must be made use of. This second method consists in the use of an air-bag or bellows, by means of which a strong blast of air can be suddenly driven into the ear; a most valuable suggestion of Dr. Politzer, and hence called the Politzer method. The instrument necessary for performing this simple and valuable operation consists of a rubber-bag syringe of about ten ounces capacity, and is used as follows: Introduce the nozzle of the syringe into one nostril; half an inch is quite enough to insert it, and close the nostril upon it, at the same time closing the opposite nostril to prevent the escape of air. The mouth must be also closed. Now squeeze suddenly the bag, and a blast of air is driven through the nostril into the throat, and by way of the Eustachian tube into the middle ear.

In children, the forcible inflation of the drum cavities can be secured by this simple process, as described. In the adult, this inflation can not be effected without the aid of the palatine muscles. To secure their assistance, we take advantage of the swallowing act to aid in opening the trumpet mouth of the tube, and simultaneously with the lifting of the palate, the air-blast is given. As many persons can not go through the act of swallowing without having something upon which the muscles can act, a little water is taken into the mouth at each attempt. A puffing in the ear, represented as a fullness of the head, is the evidence that the operation has succeeded. The bag syringe is made more convenient for practicing inflation if a piece of small rubber tubing is attached to the nozzle. To the free end of this tubing may be attached a conical plug made of hard

wood, rubber, or glass, with a perforation passing through its centre. When thrust into the nostril, this conical end will plug up the nasal opening of one side perfectly. A decided advantage gained by the addition of the rubber tube is, that in suddenly and forcibly squeezing the bag, the motion of the hand is not transmitted to the nozzle to cause pain in the nostril, which must be more or less the case when the nozzle of the syringe is directly introduced.

With this simple air-bag a great many cases of recent catarrhal deafness can be relieved and serious inconvenience prevented. Through the instrumentality of this air-bag, specialists often gain great reputation in restoring, as if by magic, hearing in cases of deafness of many months' continuance. Had the family physician employed this simple means at home, instead of sending his patient a long journey to have this simple operation performed, he could have secured all the credit for himself, and saved the patient much inconvenience and expense.

If a rubber bag is not at hand, an efficient inflating apparatus can always be improvised, provided a piece of small rubber tubing can be found. One end of this can be inserted into the nostril of the patient, while the surgeon takes the other end into his own mouth, using his own lungs as the inflating bag.

Where artificial inflation is deemed necessary in the treatment of catarrhal deafness, and it is the most valuable remedy that the specialist in aural surgery has, the use of the air-bag can be kept up for months with great advantage.

There are, unfortunately, many cases in which the obstacle to the admission of air through the Eustachian tubes is too great to be overcome by this method of inflation, however forcibly the air-blast may be driven. The application of the Eustachian catheter becomes then necessary.

This instrument consists of a hollow cylindrical tube about five inches long. One end—the larger one—which may be called the handle, is trumpet-mouthed. The distal extremity of the catheter is slightly curved for the distance of one-half

to three-quarters of an inch. On the enlarged end is placed a loop of wire which corresponds with the direction of the curved beak of the instrument, so that when the beak is hid from view in the throat of the patient, the direction of the curved end can be determined by the position of the eye, as the loop is called.

To use this instrument with skill, the position of the Eustachian orifice must be accurately remembered. In examining the side of the throat, which has been exposed by splitting the head vertically, the mucous walls of the pharynx covering the side of the throat represent two low ridges, between which the Eustachian opening is placed. The antero-posterior diameter of the pharyngeal cavity is about one inch, and this opening is, therefore, about one-half of an inch from the posterior wall of the pharynx. The opening, which is a long oval, nearly one-quarter of an inch in its longest, the vertical, diameter is situated only a little above the level of the floor of the nose. It must be remembered that the nasal passage is not a true cylinder, but an irregularly flattened tube with ridges, called turbinated bones, jutting from the outer wall into the cavity. These partitions divide the length of the nasal tube into horizontal passages of various diameters, called meati. The middle septum is usually a smooth vertical wall occupying the median line. Sometimes it is bent out of the perpendicular, encroaching more or less upon the calibre of one side of the nostril, while it amplifies the other.

The larger of the passages running horizontally backwards into the pharynx, is the so-called inferior meatus. This passage follows the floor of the nose, and is overarched by the inferior turbinated bone which projects inwards toward the vomer septum. The passage above this projecting shelf is called the middle meatus, and is narrower than the passage below it. *Through this lower meatus*, the Eustachian catheter must be passed to reach the opening of the air tube in the throat, which is located on a level with the posterior extremity of the inferior turbinated bone. Should the catheter be introduced

through the middle meatus, or horizontal passage above the inferior turbinated bone, its beak must necessarily remain above the Eustachian orifice. In this position it would be quite impossible to rotate sufficiently the end of the catheter to enter it into the mouth of the Eustachian tube, and the unsuccessful attempt would cause much suffering.

To perform the operation of catherization of the Eustachian tube, as it is called, which means the introduction of air directly into the drum cavity by the insertion of the end of a cylindrical tube into the pharyngeal opening of the Eustachian passage, requires a proper catheter, suitable to the capacity of the nasal meatus, a rubber bag with nozzle to fit the end of the catheter for the purpose of making the air-blast, and a piece of rubber tubing from sixteen to eighteen inches long, to be used as a diagnostic tube. By this piece of rubber tubing, one end of which is inserted into the external meatus of the patient's ear, and the other end in the ear of the surgeon, both making air-tight joints, sounds made by the introduction of air into the drum cavity are readily transmitted, and any impulse felt in this way, the success of the catherization is recognized.

If the nasal passages were uniformly straight, the septum always vertically placed, and the turbinated bones not too prominent, there would be no special difficulty in introducing the catheter of ordinary size. Often, however, the septum is diverted from the vertical position, and being forced to one or the other side, makes one passage very ample at the expense of the other, which is irregularly contracted. The normal Schneiderian membrane lining the nasal passage is always very vascular and extremely sensitive to pressure. These properties necessitate a very careful and delicate manipulation in introducing the catheter so as to avoid pain and bleeding. I would suggest to every physician who is about to undertake this operation, to pass the instrument first through his own nose, observing the points where it binds and the pain which it causes. He must not stop short of traversing the whole passage into the pharyngeal cavity. This experience will better impress

upon him the necessity of delicate manipulation than the passage of the same upon a hundred patients.

To introduce properly the Eustachian catheter, the large end must be held between the thumb and index finger of the right hand, with the shaft vertically upwards. Depress the upper lip with the index finger of the left hand, so as to efface the fold which protects the entrance of the nasal passage; then introduce the beak of the catheter until the curved end is lost sight of in the nostril. As soon as the point of the instrument is well passed this first ridge, remove the finger from the lip, where it is no longer wanted, and with it elevate the tip of the nose. Simultaneously with this movement, the catheter is brought to the horizontal position, by which the beak is made to touch the floor of the nostril, along which the instrument must glide without fail in its progress toward the pharynx. To insure this, the shaft of the catheter must touch the upper wall of the elevated nostril, and therefore must be even above the horizontal plane. The point being now fairly within the inferior meatus, the catheter is very gently pushed directly forward, and in the majority of cases, provided the beak is kept resting upon the nasal floor and the handle well elevated, the catheter will traverse the length of the nasal passage and its end emerge in the pharyngeal fossa. Should any obstruction be met with from displacement of the median septum, the beak must be very gently rotated, *so as to adapt itself* to this irregularity. In a few cases, after the instrument has nearly traversed the passage, and meeting then with an obstacle, I have found it expedient to rotate the beak even upward, before I could succeed in working the catheter into the throat.

We will know when the pharynx is reached by the readiness with which the inner end of the catheter can be twisted from side to side; also by the length of the instrument inserted, from four to five inches of the shaft disappearing, depending on the age of the patient and the development of the face; also by the sudden dropping of the beak over the base of the soft palate; and also by the instrument striking the posterior wall

of the pharynx, where its muco-muscular walls line the border of the cervical vertebræ.

If the catheter has traversed the entire length of the lower meatus, and is in a proper position to be introduced into the Eustachian opening, it must lie perfectly horizontal and at right angles with the surface of the lip, sometimes even pressing the upper margin of the nostril. If the facial end of the catheter inclines at all downward, it would indicate that it had traversed the middle meatus above instead of below the inferior turbinated bone, and had been, therefore, improperly introduced. In its defective position, the beak lies so far above the Eustachian opening that it will be impossible to enter it, therefore the catheter must be withdrawn and more carefully introduced, by giving the handle a greater elevation. When in place, the only guide to the direction of the beak of the catheter is the loop or eye at its exposed end, and during the further manipulation with the instrument this eye must be carefully watched.

In continuing the operation the catheter, still held lightly between the thumb and index finger of the right hand, is pushed backwards until it strikes against the posterior wall of the pharynx. The eye of the instrument looking downwards toward the upper lip. This is our first landmark. In the next step of the operation, the catheter is drawn forward about one-half of an inch, which allowance is made for the median position of the Eustachian opening. In the third stage of the manipulation, the eye of the instrument is rotated outward and slightly upward, looking in the direction of the external ear. As the beak of the catheter must follow the same course of rotation in the throat, its extremity is brought into the immediate neighborhood of the Eustachian opening, so that a very little to and fro movement will insert it. We know when the beak has entered the open mouth of the trumpet, as it is grasped more or less firmly by the pharyngeal muscles which surround the opening, which fixes it and prevents free rotation. Should the patient now be made to swallow, the action of the con-

stricting muscles of the pharynx will cause a visible rocking of the exposed end of the catheter.

Having in this way assured ourselves of the satisfactory placing of the catheter, we then secure it firmly in position by holding it from above between the thumb and index finger of the left hand, resting the other fingers upon the nose and face of the patient to secure a steady support. The right hand is now free for other purposes. With it we adjust the diagnostic tube which connects the ear of the surgeon with the ear of the patient which is undergoing manipulation. This tube must sustain itself by fitting tightly into the two ears of the two persons. It should not be held in position, as the friction of the finger upon it will transmit sounds which will mask those of the air-blast which we are listening for. The surgeon is now ready to take the syringe in his right hand, and introducing the nozzle tightly into the free end of the catheter, which must be firmly held in its position, he gives the bag a sudden squeeze. As the air from the bag has no other passage for escape, except along the catheter and Eustachian tube, the blast is felt filling the drum cavity, and is heard by the surgeon as it is driven in against the inner surface of the tympanic membrane. Several blasts must be given in succession to insure free inflation of the cavity.

During the various steps of catherization of the Eustachian tube, but more especially the introduction of the catheter through the nasal passage, the head must be held steady. Any movement of the head interferes with the direction of the catheter, and therefore causes pain. I have always recourse to chloroform inhalation, which expedites wonderfully the whole proceeding. When the catheter is in position, medicated vapors, and even fluids can be as readily introduced into the drum cavity as air, and under certain conditions these are found very beneficial.

By adopting one of these plans for forced inflation of the middle ear, many cases of deafness can be successfully treated by the family physician, and a very large number of persons

can have the sense of hearing restored or improved who are not in a position to consult scientific aural surgeons.

Yours truly, J. J. CHISOLM, M. D.

LOUISVILLE, KY., December 18, 1873.

To the Medical Public,—During the month of June, 1873, I received from Dr. R. A. Kinloch, Dean of the Faculty of the Medical College of South Carolina (located at Charleston) the annual circular of that Institution. In this circular the system of Beneficiary Scholarships (for medical students) publicly adopted by medical colleges in New York, Baltimore, Richmond, Wilmington, Atlanta, Louisville, and other cities, and privately adopted in all medical colleges, was rudely assailed. In the same circular, Dr. Kinloch, though abusing this system of scholarships and the many honorable Institutions granting them, offered "free teaching" to medical students, while he charged these unfortunate young men $25 each.

In an editorial under the caption of "What is Gas," I presented this offer of Dr. Kinloch as the best tenable answer to that question. Feeling sore and discomfited under the exposure of his silly sham, Dr. Kinloch asked that space in my Journal should be accorded to him for a reply. Space was given without limit; the reply was published, and editorial foot-notes accompanied the greater portion of it. Dr. Kinloch realizing that he had been doubly ridiculed and more fully exposed, asked space for still another trial, a second reply. This was promised. The reply came. Instead of its containing, as he promised it would, corrections of alleged misstatements of mine, it was simply a coarse and impertinent review of my public official relations and the official relations of my colleagues. With this letter there was sent a personal note, stating that he would not publish his reply in the "Charleston Medical Journal," of which he is an editor, because he could not give space to such matter; his own production. I did what he might have anticipated; laid aside the manuscript and dismissed the whole matter from consideration. Stung by the result of all of his efforts, he a

second time sought the secular papers of Charleston, and laid his little grievances before the general public; keeping his first act of this kind a secret from me. Large numbers of the papers containing his article were sent to prominent medical gentlemen throughout the United States. When in December, 1873, I heard accidentally (for my Carolina friends thought this letter was so silly that they did not notify me of it) that Dr. Kinloch had appealed in September last, through the daily prints, to the secular public, I was, in justice to my colleagues, if not to myself, forced to reply. I did so in courteous and unexceptionable language. This reply appeared in the "Charleston News and Courier" of December 12th. In the issue of that paper for December 13th, there appeared from Dr. Kinloch a letter addressed to the general public, and one addressed to myself. The paper containing these letters has been sent by Dr. Kinloch, as he states, to a very large number of physicians, while the paper containing my letter reached only the regular subscribers to the paper.

Having received from a friend a copy of the "Charleston Courier" containing Dr. Kinloch's last letters, I endeavored to read them, but the coarseness, vulgarity and falsehoods of their author rendered the effort impracticable. They aroused but one feeling, that of inexpressible disgust. They induced but one conviction, that the writer never had been and never could be a gentleman. I have not yet read his letters, and never can do so. The opening sentence, with a few others, was quite enough to deter me. In this sentence, Dr. Kinloch says, that for one living in a glass house, I am recklessly fond of throwing stones; or "dirt," as he classically writes. Now all but Pharisees live in glass houses. Were my "house," however, thinner than glass; more fragile; were it as transparent and flimsy, as the silly sham perpetrated by Dr. Kinloch, of offering "free teaching" to students, charging them, nevertheless, $25 each, I would still throw stones; and I will continue to throw them, with all my might, whenever, as a journalist, I see that it is proper and necessary to do so. As to the results,

I have duly estimated them, and am prepared to meet them. There is but one course for me; that is to insert in the Charleston papers the following letter. With its publication, I dismiss Dr. Kinloch, and consign him to that swift repudiation which physicians justly mete out to those of their number who outrage the laws universally recognized by gentlemen:

LOUISVILLE, KY., December 18, 1873.

Editor of the Charleston News and Courier:

Dear Sir,—I have just seen the communication of Dr. R. A. Kinloch, of Charleston, S. C., in your issue of December 13th. As you have previously and generously given me the use of your columns, I ask the privilege of paying for the insertion of this note.

When I first noticed Dr. Kinloch, I made the singular error of supposing that he was a gentleman. I now appreciate the magnitude of my mistake. His recent publication is not only silly, wordy and pointless, but it manifests such inborn coarseness; such an utter disregard for truth; honor; justice; manliness; decency and propriety, that I could not stain myself by again publicly noticing him. The offer, over his signature, of free teaching to medical students, while he charges these unfortunate gentlemen $25 each, I have demonstrated to be a silly sham. I will continue to expose this sham, but I will never make any public reply to Dr. Kinloch. Truly yours,

E. S. GAILLARD, M. D.

THE CLIMATE OF COLORADO.

DENVER, COLORADO, 1873.

Dr. E. S. Gaillard:

Sir,—I had my first paroxysm of asthma at Bardstown, Ky., in 1855. The attacks were frequent, though not severe for the first year or two. I spent the greater part of the winter of 1858–9 in Philadelphia, where I suffered more than ever before. By 1863 I was so reduced in strength and flesh and general

health that I could no longer pursue my profession at Bardstown. I rarely passed a night without frequent and violent paroxysms. Generally these paroxysms were relieved by the fumes of saltpetre, but not always. I have spent days and weeks in my room when nothing would relieve me. Chloroform, by inhalation, I have taken hundreds of times, to complete insensibility, not indeed to relieve the difficult breathing, for it had no such effect, but to afford a few hours of insensibility to suffering. In 1863 I removed to Louisville, Ky. Here, for five years, my health improved a little; but after that I relapsed into my former condition. In fact, I think my sufferings were more intense in Louisville in the last years of residence there, than at Bardstown. I was very much troubled too with a cough for the last year, a symptom new in my case.

On the 31st of December, 1871, I reached Denver. That night I slept well and awoke in the morning free from asthma. I had not slept a night without suffering for years. But the next night I had my paroxysms as usual, and continued to have them every night for six months. I suffered less than usual during these six months, but had several pretty severe paroxysms. About the last of the following June, I had an attack as severe as any ever experienced in Kentucky. I was confined to my chair and did not sleep for four or five days and nights. With a view of breaking up this severe attack, I went to Georgetown, or rather to Silver Plume, a little town two miles beyond Georgetown, and 1,200 or 1,500 feet high in the mountains. Here for nights I suffered even more than at Denver. I came back from the mountains thoroughly convinced that the air of Colorado was no cure for me. I had in the six months gained thirty-six pounds in weight, but had in a week, and that during the brightest and most beautiful weather that can be imagined, lost it all. I had fully made up my mind to leave Colorado, but all at once my health improved. I slept well the first night after my return from the mountains; and with the exception of three or four nights last winter, when otherwise out of health, I have suffered none since. I still have at times

slight difficulty in breathing, but with Kidder's Asthmatic Pastilles, which I have used for many years, or Himrod's Cure for Asthma, which I have used lately, all asthmatic symptoms have instantly vanished. Few could have enjoyed better health than I have had for the last twelve months. The slight paroxysms alluded to have not been of sufficient consequence during that twelve months to interfere with my walking to any part of this city. I sleep well every night. I have regained also my thirty-six pounds of weight. I feel almost sure that after a year or so more I shall have no more asthma. I think the history of asthma in Colorado will justify the further statement I will now make—namely, that the air or climate of Colorado, either at Denver or in the mountains, will cure all the cases of asthma. This statement I make with the knowledge of the few rebellious cases now in the Territory that are not yet relieved, and those patients who, after too short a sojourn, left the country without being cured.

I may add that my son, aged about twelve years, came with me to Colorado in 1871, on account of asthma. He had had in Kentucky a little wheezing and restlessness at night, but no well-marked paroxysm of asthma. Two or three months after we got to Denver, as he still had wheezing at night, he went to Silver Plume, where, in about three or four weeks, he was entirely relieved. He resided in Denver for a year, then went to St. Mary's College, Kansas, where he remained five months without the slightest trouble. But when, in July last, he went to Bardstown, Ky., to spend the vacation, he suffered severely for the two months he was there. He returned to St. Mary's the first of September, and still has a little asthma; but, I repeat, he had no asthma in Colorado after his visit to the mountains.

W. H. NEWMAN, M. D.

WHITEVILLE, TENN., November 22, 1873.

Editor Richmond and Louisville Medical Journal:

Dear Sir,—As winter is close upon us, and the vicissitudes of weather which are favorable to the production of pneumo-

nias are sure to supervene, I feel it a duty, as well as a pleasure, to call the attention of my brethren, through the medium of your excellent Journal, to a new remedy, so far as I know, in the treatment of that grave disease.

I had under my charge last spring a severe case of pleuro-pneumonia. I was called to the patient's bedside in six hours after the initiatory chill, and found all the symptoms of pain, cough, dyspnœa, and frequent full pulse, urgent. Crepitation and dullness in lower lobe of left lung. I applied the usual remedies, but found on my return the second day that the engorgement had increased. Third day, the whole of the lower lobe involved, and crepitation heard in lower portion of upper lobe. On this day I found my patient expectorating profusely a frothy, sanguineous matter. In fact, the ingredient of blood in the sputa was so great that the remedies for hæmoptysis at once were suggested to my mind. Foremost among these came ergot. I prepared a very strong decoction of powdered ergot, and directed that the patient take one ounce every second hour, together with the usual remedies in such cases. On my fourth visit, twenty-four hours later, I was really surprised to find my patient better in every respect; the sputa now had but a slight red tinge, and were greatly diminished in quantity; cough and dyspnœa less urgent; pulse had abated from 130 to 110 and softer; engorgement beginning to retrograde. I continued the ergot, and twenty-four hours afterwards found my patient *decidedly convalescent.*

Since this trial of ergot, I have used it in ten other cases, as an adjuvant, and found it to have a good effect in seven out of ten; as to the other three, I could note no effect whatever.

I know that it will not do to count too much on this short and limited experience of mine in this use of the remedy, but nevertheless I feel assured that my medical brethren will give it a fair trial the coming winter, as it is certainly harmless, if it does no good.

I adopted it on the theory, that it has a direct action on the smaller blood vessels, diminishing their calibre, and thereby

preventing engorgement, exudation, and hæmorrhage. I hope that future experience will throw more light on the modus operandi of ergot, and show us how and when to exhibit it in pneumonia and other diseases with certainty.

Yours, truly,

A. P. WADDELL, M. D.

MORLEY, MICH., 1873.

Dr. E. S. Gaillard:

Dear Sir,—It is generally understood I believe in the Profession, that when any one of its members has made a discovery, a knowledge of which might perhaps tend to the alleviation of human suffering, he is in duty bound to impart such knowledge to his professional brethren, to be used by them as occasion may suggest.

The novelty, as well as the absurdity involved in the following advice of a physician, given to his patient for the cure of leucorrhœa, has led me to make it a matter of record: A certain lady, not far from this place, blessed with an ordinary amount of common sense, consulted a physician (so called) with reference to obtaining relief, or a cure for the whites. He at once told her that he could cure her without any trouble; and in fact took particular pains to assure her that he had been peculiarly successful in that complaint, as his mode of treatment differed somewhat from other physicians. He simply recommended her to use a *cathcter* (which he furnished himself), and *draw off the whites.*

Soloman declares that there is nothing new under the sun; but I declare this is something new, to me at least; and I think to the Profession generally. That same lady has been faithfully striving with that catheter for the last three months to draw off the whites; and it was not until a few days ago, when her husband consulted me, and I explained to him the nature of the whites, and the absurdity of such a course of treatment, that he or his wife had any idea but what the catheter would effect a cure.

Don't you think that it is high time that we had a law emanating from Congress to limit the practice of medicine to those who really know something about it? We have laws to regulate traffic in every other commodity but human life. That seems to be left open to the prey of everybody.

Respectfully,

W. W. Bowes, M. D.

Surry County, Va., Dec. 3, 1873.

Dear Doctor:

In the October number of the Journal, page 531, you made the "Chicago Medical Times" responsible for a *new* method of swallowing a pill. What if this *new* method, like so many other discoveries, turns out to be an *old* one? I claim to have discovered this identical method in early boyhood, when I had just enough physiology to know that the tongue is made to taste with, and materia medica enough to know that quinine is *bitter*. I remember well when I took my first quinine pill without the sweetmeat accompaniments usually allowed to children. To avoid being considered a *baby*, I determined to dispense with the *sweets*, and to avoid the taste. I determined to place the pill *under* the tongue, and not on it. I did so, and took a swallow of water. To my comfort the pill was swallowed with the water, without tasting it or feeling it. Since that time it has been my misfortune to take a great many pills—probably thousands—for we have chills in this section—and I do not think I have ever put but *one* on my tongue—that was sugar-coated, and I tried the second experiment—viz., to see if I could swallow one in the ordinary manner. I have never regarded my second experiment as a very brilliant success. I have never thought this matter worthy of publication. I have told scores—perhaps I might say hundreds—of my patients of it; but to my knowledge not a half score have ever made use of it. Perhaps I should have published this long ago, and so have secured to myself the honor of originality in the single

instance in which I can claim it, and, at the same time, conferred a boon on poor pill-swallowing humanity.

Very respectfully, * * *

WARREN, MAINE, Dec. 2, 1873.

Dr. Gaillard:

Dear Sir,—I did not write up my cases of treatment of enteric or typhoid fever by carbolic acid. I have tried it again the present season, with the same favorable result. The cases were attended with much sordes, fœtor of breath, delirium, involuntary discharges, etc. In the first case I gave it to counteract the fœtor of breath and discharges from the bowels, expecting death to come to the relief soon; but much to my surprise, the patient recovered. In several cases it had the same result.

I have recently had a case of complete suppression of urine for eleven days, without any very serious results. In this case there was no organ or set of organs performing the functions of the kidneys. Now, if the system can get along eleven days without any secretion by the kidneys, why not dispense with them altogether. Yours, with respect,

B. T. BUXTON, M. D.

OGLETHORPE CO., GA., Dec. 18, 1873.

Dr. E. S. Gaillard:

Dear Sir,—I notice in this month's number of your Journal an article from the "Pharm. (Canadian) Journal," by E. Gregory, on the administration of castor oil. This calls to mind a method of administering this nauseous but excellent cathartic suggested by Professor C. D. Meigs, of Philadelphia, more than a quarter of a century ago. It consisted in mixing and swallowing it with a glass of porter or other effervescing fluid. In accordance with this suggestion, I have adopted and often used the following method so successfully, as to leave scarcely anything to be desired, in the case of adults: Dissolve in separate glasses, and in as small a quantity of water as convenient, the

acid and soda of the common soda powders, and add to one glass an ounce of castor oil, and an ounce of syrup of ginger Mix the contents of the glasses, and swallow while effervescing. By this means I have often administered it to patients without their knowledge of the presence of castor oil. The effervescence diffuses the particles of the oil so uniformly through the the mass of liquid, as to destroy all viscidity or clamminess, whilst the ginger effectually disguises the taste. This method of administering the "abominable stuff" has proved a precious resource in my hands on several occasions.

Yours respectfully,

F. H. HUTCHISON, M. D.

LOUISVILLE, Dec. 13, 1873.

Dr. E. S. Gaillard:

Dear Sir,—In the December number of your Journal I have read an article on the "Administration of Castor Oil," which proposes various methods and formulæ for disguising the taste of that valuable medicine. Having for many years employed a plan which I have found perfectly effectual, I think it worthy of some notice.

The vehicle I use is *foaming* ale or beer. That there should be an abundance of foam, is an essential point in my method. Nearly fill a teacup or goblet with foaming ale or beer, and pour the oil carefully into the centre of the foam. Do not stir or agitate the mixture in any manner. Drink rapidly, and not the slightest flavor of oil will be perceived. The oil being heavier than the foam and lighter than the liquid, floats between the two. The foam protects the roof of the mouth from contact with the oil, and the liquid protects the tongue, etc.

Yours respectfully,

R. C. HEWETT, M. D.

PROCEEDINGS OF SOCIETIES.

"Etsi non prosunt singula, juncta juvant."

THE MODERN TREATMENT OF THE ADVANCED STAGES OF CONSTITUTIONAL SYPHILIS. By WILLIAM ACTON, F. R. C. [Read before the Surgical Section at the Annual Meeting of the British Medical Association.]

On what constitutes the virus of syphilis, I fear we know little more at present than we did thirty years ago. Experience, however, has corroborated M. Ricord's observations, that relapses of constitutional syphilis are not uncommon, even after long periods of apparently perfect convalescence. These accessions of disease we may attribute sometimes to neglect of treatment; but we must admit, likewise, peculiarities of constitution and temperament as bearing on the tendency, which, in spite of the best regulated treatment, will be followed by relapses. In other instances it is noticed that any general disease which will debilitate the system may be followed by an attack of constitutional syphilis, which without such debilitating cause would never have occurred. The old theories about influence of *ferments* seem to be borne out by some of these exceptional cases. Practitioners, however, will agree with me that, in the present day, in some of these rebellious cases, patients and medical men both lose confidence in remedies, and there are those among us who, after seeing such relapses, doubt if it be the effects of syphilis or mercury which we have to treat in these advanced cases.

The *treatment* should consist in ameliorating the symptoms, commencing with those that are most urgent. We should attempt to improve the broken-down constitution, too often found in these instances; if mercury have been given, we must leave it off till the constitution has somewhat recovered. Our object should be to place the patient in the best possible condition as regards air, diet, and freedom from anxiety, and, if possible, to give him confidence that the disease is curable, for the moral

and mental depression to which the patients are reduced is often very painful to witness.

This being done, I commence with tonics and iodide of iron. If there be ulcers, I treat them with the ointment of nitric oxide of mercury. If the throat and voice be affected, topical applications must be used. If osseous or periosteal tumors exist, iodine or blisters should be applied to reduce the size of the swellings and prevent disfigurement, or pressure on the brain or spinal cord. This local and general treatment will act almost as by a charm in relieving sleeplessness and pain in the bones and joints.

In the commencement, notwithstanding that iodine may have been taken (according to the statement of the patient) without previous benefit, I commence the syrup of iodide of iron in bitter infusion, taken at meal-time in moderate doses. As long as the remedy tells on the constitution, I adhere to moderate doses; but as soon as convalescence tarries or progress is not made, I increase the dose even to two drachms three times a day. When the system becomes tolerant of these doses, I change the syrup for the iodide of potassium in solution, beginning with ten or fifteen-grain doses, taken at meals and dissolved in large quantities of fluid.

The subsequent treatment should be guided not by the number of grains given, but by the effect which the remedy has on the complaint. As soon as the disease ceases to retrograde, I augment the dose with the best possible effect. When the preparations of iodine and potash cease to benefit the patient, I add bromide of potassium, not in combination with the iodide, but prescribe it at a different time of the day. It frequently happens that we succeed in curing the disease with these salts, but if the complaint be very persistent, if relapses occur at short intervals, I no longer hesitate to give mercury, and my hearers may be glad to learn what are the indications we follow in the administration of the remedy.

Treatment with Mercury.—As a general rule, it must be admitted that mercury is not required in the treatment of the ad-

vanced stages of constitutional syphilis. In fact, we attempt to cure our patient without resorting to the mineral. On the other hand, there are many instances in which the recovery hangs fire; the patient ceases to improve even under large doses of iodine. The disease becomes stationary. Yet such are the objections of some practitioners to a course of mercury, that, in spite of the recrudescence of severe symptoms, the anti-mercurialist will not give mercury in any form. This is an error of the day. The rule which experience teaches us is that, if a relapse occur, or if the progress of recovery be arrested, after the various preparations of iodine have failed, some of the mercurial preparations must be had recourse to, judiciously given and closely watched. In some cases, friction with mercurial ointment will be most beneficial; and I must admit that in England I find the old plan of rubbing in mercury answer better than almost any other that I am acquainted with. There are those who employ fumigations. M. Ricord is very partial to a prescription combining biniodide of mercury, iodide of potassium, and sarsaparilla. In these stages, the writers of the last century had a high opinion of corrosive sublimate; but this irritant poison has fallen into disuse in modern practice. Those of my hearers who are acquainted with the writings of the older authors on syphilis need not be reminded of the almost miraculous recoveries detailed after giving mercury, long before iodine was known; and it is stated that the patient never had a relapse. These old writers, however, omitted to state how often the remedy not only failed, but brought the patient to an early and untimely grave. I can bring to my recollection many instances which, I have every reason to believe, died from the administration of mercury given on the old plan, and which would now be rescued by the mercury being preceded by the different preparations of iodine.

If mercury be found beneficial, as I am sure it will be, if judiciously given and carefully watched, the symptoms of syphilis subside, and the preparation should be persisted in till every vestige of the disease disappears. The dose required is some-

times surprisingly small. I have known obstinate symptoms, which have withstood iodine, disappear in a week. In a case now under my care, of syphilitic nodules of the testis, a six weeks' course of frictions has been required to enable the testis to recover its former elastic feel, and its functions are now performed satisfactorily. It is singular to notice in these cases how the general health improves under mercury. The patient loses the habitual earthy expression, becomes florid, and gains flesh; his spirits improve as the local affection declines, and he ceases to be liable to relapses.

Such, then, is the course of syphilis, and we must admit that it is a very serious complaint; and the few minutes that are left to me can not, I think, be better employed than in stating that, according to a recent return of the Registrar-General, the deaths of twelve infants and of one adult were directly referred to syphilis, showing an excess of five upon the corrected weekly average. Without an intimate acquaintance with the laws of syphilis, no one can venture to legislate on what are now popularly known as "Contagious Diseases."

The passing of the Acts bearing on these diseases must be attributed to the attention which has been called to the frequency and severity of syphilis. On sanitary grounds, 2,700 medical men have, during the last session, urged on Mr. Bruce the continuance of these Acts. In fact, no one now contests the beneficial influence of their operation on public health—the evidence we have brought together on this subject is overpowering; but we as medical men, and this Association more especially, have still a great task before us. We can not conceal from ourselves that, if we wish to carry out our views, we have still strong moral prejudices to overcome. Granted (say our conscientious and well-intentioned opponents) the advantage on sanitary grounds, still we object to the Contagious Diseases Acts, because we fear we shall lower the high standard of English morality. I can only repeat what I have stated elsewhere; that if I thought the existence or the extension of the Acts would have such an effect, I for one would have long ago ceased

to agitate this question; but the more the various bearings of this international question are considered, the more the ablest men of the day are convinced that the Contagious Diseases Acts have a moral tendency. I hope that they will be more thoroughly year by year carried out, notwithstanding all the clamor that has been raised against them; and I have no hesitation in asserting that, the longer these Acts are in operation, the more beneficially will they be found to act on the morals as well as on the improved sanitary condition of our population. The day is at hand, I hope, when foreign precautions against syphilis will not be defeated by the influx of diseased British sailors into foreign ports, because a minority of well-intentioned but narrow-minded English men and women refused to sanction the examination and seclusion, when found diseased, of common prostitutes. I hope to see the day when the disease (the ravages of which we have been describing) should be stamped out. This almost total extinction has been found successful at Malta, and, on a small scale, syphilis has been banished from the garrison at Colchester. It has diminished in all our large garrison towns where the Acts have been in operation; and I am pleased to hear that in the Lock Hospital of London, which at one time had not beds enough to accommodate the Government patients, there are not sufficient women to fill the wards appropriated to these cases.

But differing as we do about the benefits of the Contagious Diseases Acts, all are agreed that the agitation to which they have given rise must be attended by ultimate benefit; not the least of which is that the public women of England will be no longer allowed to disseminate a disease, the consequences of which I have, I fear, but feebly described in this paper.—*British Medical Journal.*

CHEMICAL AND PHARMACEUTICAL.

"Diruit, ædificat, mutat."—Hor.

Cod-Liver Oil and Lacto-Phosphate of Lime. By Edward Chiles.—This remedy is being quite extensively prescribed by physicians, and as considerable inquiry has been made as to an eligible mode of prescribing it, I will give my experience in the manufacture of the article, and also a simple process for making syrup of lacto-phosphate of lime.

For a long time I have had demand for a tasteless cod-liver oil, and have been in the habit of preparing it in the form of an emulsion with gum arabic and water, and covering the odor with a few drops of essential oil of bitter almonds.

Over a year ago I found physicians were prescribing cod-liver oil and lacto-phosphate of lime, and I devised a formula for it, based on my experience, with the simple emulsion and the syrup of lacto-phosphate of lime, for which a considerable demand had sprung up. The formula I then devised has been followed by me up to the present time, and has invariably given satisfaction, and produces an article which does not separate or become rancid.

I think, however, it should be prepared extemporaneously, as prescribed by physicians, and I have not kept it on hand, but prepare it as wanted, thus always giving a perfectly sweet article.

Take of Gum Arabic, ℥ij. ℥ij.;
Water, f℥ij.;
Syr. Lacto-phosphate of Lime, f℥vi.;
Cod-liver Oil, f℥viij.;
Essential Oil of Bitter Almonds, six drops.

Rub the gum, water and syrup together, until a smooth mucilage is made, then add the oil gradually with constant stirring, and, lastly, the oil of bitter almonds.

Thus made, each tablespoonful of cod-liver oil and lacto-phosphate of lime contains four (4) grains lacto-phosphate of

lime and fifty per cent. of cod-liver oil. The gum in the above should be selected, ground, and passed through a sieve of sixty meshes to the inch. Cod-liver oil and lacto-phosphate of lime, prepared in this manner, form a preparation free from unpleasant taste and odor, and enable the practitioner to administer these valuable remedies without repugnance on the part of the patient.—*Amer. Jour. of Pharm.*

Ozonization of Air in the Sick Room.—Dr. Lender ("Deutsch Klinik, No 19, 1873,) proposes an easy means of carrying out the above object. He mentions the use of a powder composed of peroxide of manganese, permanganate of potash, and oxalic acid, which has the property of giving out, in contact with water, an abundant quantity of ozone. For a chamber of middling size he uses about two tablespoonsful of the powder, over which he pours from one to one and a half tablespoonsful of water every two hours. In this way the quantity of ozone produced is exactly what is wanted; the presence of a larger quantity in the air would occasion a cough. All kinds of metals, except gold and platina, must be removed from the room, on account of the oxidizing effects of ozone.—*Ex.*

Electro-Chemical Copying Press.—Signor Zuccato, of Padua, has invented an electro-chemical copying press, which in outward form resembles an ordinary copying press, only that the lower plate can be pulled out. On the movable plate lies a tinned copper plate framed in mahogany; to the upper plate of the press, also framed in mahogany, is fastened a second copper plate. The writing or drawing which is to be copied is made by a stile on a steel plate, which has been previously coated with wax in the same manner as etchings are prepared on glass. From one to six sheets of paper, previously saturated with ferrocyanide of potassium, are laid upon this plate. The press is closed, and the upper and lower copper plates are connected with the electrodes of a galvanic element. The current spreads itself with perfect uniformity over the surface of the metal plates, but from the steel plate it can only reach the

upper copper plate through the damp paper in those places where the metal has been laid bare by the tracing. The ferrocyanide of potassium is changed to Prussian blue. The writing penetrates to the outward sheet where it is not covered—of course the upper sheets are not so sharp. An indefinite number of copies can be taken in this way, it only being necessary to insert newly-prepared sheets of paper. The copies being made in Prussian blue are quite indelible.—*Ex.*

Action of the Cinchona Alkaloids on Bacteria.—Dr. E. Buchanan Baxter arrives at the following conclusions as the results of a large number of experiments upon the influence of the four chief alkaloids of cinchona bark over bacteroid organisms:

1. Quinia is doubtless excelled by other antiseptics, but there is no substance equal to it in antiseptic power which can be introduced into the blood in the same proportions without risk of fatal effects, if we except the other cinchona alkaloids, and the sulphate of bebeeria.

2. Quinia in such fractional doses as are capable of being introduced into the circulation exerts an inhibitory, not a toxic, action upon microzymes. It may check septic changes, it can not destroy the organisms to which such changes are due.

3. The four cinchona alkaloids are very nearly equal in antiseptic power. Arranged in the strict order of their efficacy, they stand thus: Quinia = quinidine; next comes cinchonidine; last, though at no great distance, cinchona. This order corresponds to that in which they have been arranged with reference to their antiseptic power.

4. Among reputed antiperiodics, the sulphate of bebeeria seems to equal quinia in antiseptic power.

5. Among reputed antiseptics, sodic sulpho-carbolate and strychnia have a decided value, though they stand some way below quinia; sodic sulphite has a feeble though decided antiseptic value; sodic hypo-sulphite little or none; bebeerin and æsculin are hardly, if at all, antiseptic; potassic picrate is

almost equal to quinia, but it is doubtful whether it can be given in sufficient doses without danger to life.—*The Practitioner.*

Caustics vs. Weeds.—A recent writer of a chemical turn of mind says: "Two years ago I took a large house and grounds which had been uninhabited and utterly neglected for three years. The lawn is nearly an acre in extent. Dandelions, buttercups, plantains, docks, etc., were in the ascendant. After many attempts to eradicate them, I found at last that one drop of the common strong sulphuric acid dropped upon the crown of each weed entirely destroyed it, and it will never grow again. I used one of the ribbed bottles employed by chemists and photographers for dropping poisons, and found it to answer perfectly, and it enables one to apply the acid with great rapidity. Large docks, which have heretofore never been destroyed except by digging up, are effectually destroyed by the acid."—*Ex.*

The Age of Eggs.—The "Lancet" quotes the following from a French authority as the mode of ascertaining the age and consequent freshness of an egg: Dissolve one hundred and twenty grammes of common salt in a litre of water. If the egg is one day old, it will sink to the bottom; if it was laid the day before, it will not reach the bottom; if three days old, it floats; and if more than five, it comes to the surface, and the shell projects more and more according to staleness.—*N. Y. Med. Record.*

New Test for Albumen.—Picric acid has been recommended as a test for albumen. If a drop of the fluid to be examined be allowed to fall into picric acid, it sinks through, and, if albumen be present, leaves a white streak. Dr. Bowditch has found that two drops of egg-albumen added to twenty c. c. of urine gave a slight reäction with heat, a distinct one with nitric acid, but none with picric acid, and that on increasing the quantity to four drops only a feeble reäction was obtained.—*Boston Med. and Surg. Jour.*

MISCELLANEOUS.

"Non omnes eadem mirantur ament que."

The physicians of Memphis have recently given to Dr. Luke P. Blackburn, of Louisville, a handsome testimonial of their gratitude and admiration for his services gratuitously rendered to the citizens of Memphis, during the recent epidemic of yellow fever. The city also gave to Dr. Blackburn a handsome testimonial. In response, this gentleman made the following tributes, which should be permanently preserved:

"Providence, in His wisdom, had afflicted their city with a heavy hand; many had fallen, yet, from this chaos of destruction, Dr. Blackburn said he felt much good would arise. The people of the North, with a generosity unexampled in history, in the midst of their own financial distress, had sent contributions to the city of Memphis. They had not only given freely and with alacrity, but they said: 'We will send you more.' Besides this profusion of money, the North sent her representatives. Among them came a young and gentle girl from Illinois—Mattie Stevenson. As soon as the voice of suffering and distress reached her ear, she came uninvited, unacclimated, to render such aid as was in her power. She came as gentle and as timid as a fawn that sports over the wide prairies of her adopted State. It was his lot to invite her to the harvest of death. On the evening of her arrival, he introduced her into the sick-room of a dying female—a scene that would cause the heart of the stoutest to quail; yet, with all her gentleness, she exhibited a nerve and devotion to the cause of humanity that at once endeared her to him. In the midst of all this suffering, sickness, and death, she herself was stricken down. She was placed under his charge. He watched her with a father's care and solicitude, and her pure spirit will bear testimony to the affection and love which he bore her, and to his vain efforts to save her life. You may, said the Doctor, erect a monument to her memory that may pierce the clouds,

but the monument which she erected in the hearts of this people will glitter in brightness and gratitude, when the marble shaft which you shall place upon her bosom shall have been moulded and dimmed by time.

"Dr. Blackburn then referred to the services of Lula Wilkinson. Born in their city, an orphan, unknown, she voluntarily threw herself into the midst of the fight; she never faltered or wearied until she was stricken down by the rapacious monster that had carried off so many of the bravest and best. But it pleased God to spare her life, and she now remains a living monument of the terrible scourge which had afflicted their city. Gentlemen, said Dr. Blackburn, guard her, prize her; she is the brightest gem in the diadem of Memphis. The tongue that would utter one word of slander against her should be paralyzed; the hand that would be raised against her should be palsied; the heart that would nourish one hard feeling against her should be withered."—*Courier-Journal.*

A Good Dinner.—At the period of the New Year festivals, physicians will read with pleasure the following good description of a good dinner: In proposing the health of the guests at the dinner during the recent meeting of the International Medical Congress in Vienna, Professor Hebra said that nothing in the world gave better evidence of the necessity of coöperation among nations than a good dinner. For, he said, Russian caviar and Belgian oysters, Norwegian anchovies and Rhine salmon, commence the courses, and lay a good foundation, with the powerful support of English roast beef and mutton chops. After them come the capon from Styria, the pheasant from the Bohemian preserves, guinea fowl from Croatia, venison from the Austrian mountains, followed by Italian fruit, Swiss cheese, and Dutch liquers. As intercellular fluid, Spain and Hungary supply sherry and Tokay, Germany Rüdesheimer and Johannisberger, France Bordeaux and Champagne; Arabia and the West Indies the fragrant and delicious coffee, while Havana, Turkey and America furnish the delicious weed.—*British Med. Jour.*

Ancient State of Surgery in Scotland.—When the surgeons of Edinburgh were, in 1506, incorporated under the denominations of surgeons and barbers, it was required of them to be able to read and write, "to know anatomie, nature, and complexion of everie member of humanis bodie, and lykwayes to know all vaynes of the samye, that he may make flewbothemie in due time;" together with a perfect knowledge of shaving beards. These were all the qualifications that seemed necessary to the art of surgery at the beginning of the sixteenth century. The practice of physic was, if possible, in a still more deplorable state—*Campbell's Journey from Edinburgh to the Highlands.*

The Cæsarian Operation.—The first authentic instance of this operation in the British Isles, was that performed with success by Mary Dunally upon Alice O'Neal, in Ireland, in 1739, after a labor of twelve days; and the first *recorded* in the United States, by a girl fourteen years of age upon herself, in 1812. Of the first 38 cases operated upon in Great Britain, covering the period from 1739 to 1845, but four are recorded, one being that referred to as the work of a common midwife. Several women have been known to recover, and their children live, after the latter have been removed from them through a rent produced by the horn of a bull or cow.—*Amer. Jour. of Obstetrics.*

One of the best methods of treating neuralgia is that recommended by Trousseau. A tight-top thimble is filled with cotten wool, and a few drops of strong aqua ammonia dropped on it. The open mouth of the thimble is then applied over the seat of pain for a minute or two until the skin is blistered. The skin is then rubbed off, and upon the denuded surface a small quantity of morphia (gr. ¼) is applied. This affords almost instant relief. A second application of the morphia, if required, is to be preceded by first rubbing off the new formation that has sprung up over the former blistered surface.—*Med. Archives.*

Sublime Eloquence.—When the Kentucky soldiers, who fell at the battle of Buena Vista, Mexico, were brought home, and interred at the capital of the State, among the sad ceremonies on this occasion was the delivery of an ode by Theodore O'Hara. This ode abounds in beautiful passages, but none have justly been so much admired as the following verse:

"The muffled drum's sad roll has beat
The soldier's last tattoo;
No more on life's parade shall meet
That brave and fallen few.
On Fame's eternal camping-ground,
Their silent tents are spread,
And Glory guards, with solemn round,
That bivouac of the dead,"

The Title of "Doctor."—"The title of Doctor" was invented in the twelfth century. Irnerius, a learned professor of law at the University of Bologna, induced the Emperor Lothaire II., whose chancellor he was, to create the title, and he himself was the first recipient of it. He was made doctor of laws by that University. Subsequently the title was borrowed by the faculty of theology, and first conferred by the University of Paris on Peter Lombard. William Gordenio was the first person upon whom the title of doctor of medicine was bestowed; he received it from the College of Asti, in 1329.—*Ex.*

Capillary Puncture of the Pericardium by Subcutaneous Aspiration.—In the "Lancet" we find a report, by Dr. Chairon, of a case of capillary puncture of the pericardium. The patient was a young soldier, who, at the end of an attack of pleurisy, presented all the symptoms of dropsy of the pericardium. M. Chairon introduced a capillary needle into the pericardial sac, and drew off a large quantity of sero-sanguinolent fluid, which quickly gelatinized. No accident attended the operation, and the following day he found the patient lounging about the passages of the hospital.—*Ex.*

Important Donation to Science.—Professor Tyndall, during his recent scientific lecturing tour in the United States, deliv-

ered in all thirty-five lectures, at which his receipts aggregated $23,100. After paying expenses, a fund of over $13,000 remained; and this, before leaving for Europe, he placed in the hands of a committee, who are authorized "to expend the interest in aid of students who devote themselves to original research." The committee are Professor Joseph Henry, of the Smithsonian Institute; Professor E. L. Youmans, of Yale College, and General Hector Tyndall, of Philadelphia.—*Cin. Lancet and Obs.*

Sketch of the Life of Edward Jenner.—The readers of the Journal will, it is hoped, be pleased with the excellent likeness of Jenner, issued in this number. As all desire to be familiar with the salient and chief facts in his history, there is herewith furnished a short sketch of his life:

"Edward Jenner was an English physician, celebrated for having introduced the practice of vaccination as a preventive of the small-pox. He was the youngest son of a clergyman in Gloucestershire, and was born May 17, 1749. Being destined for the Medical Profession, he was, after a common-school education, placed as an apprentice with a surgeon, at Sodbury, in his native county. He subsequently visited London, to finish his studies by attending the lectures of the celebrated anatomist, John Hunter. Returning to the country, he settled at Berkeley, to practice the various branches of his profession. He had already obtained the reputation of an ingenious practitioner and a man of talent and science, when he made known to the world the important discovery which has raised him to an enviable situation among the benefactors of the human race. His investigations concerning the cow-pox were commenced about the year 1776, when his attention was excited by the circumstance of finding that some individuals, to whom he attempted to communicate the small-pox by inoculation, were not susceptible of the disease; and, on inquiry, he found that all such patients, though they had never had the small-pox, had undergone the casual cow-pox, a disease common among the farmers and

dairy-servants in Gloucestershire, who had some idea of its preventive effect. Other medical men were aware of the prevalence of this opinion; but they treated it as a popular prejudice, and Jenner seems to have been the first who ascertained its correctness, and endeavored to derive from it some practical advantage. He discovered that the variolæ vaccinæ, as the complaint has been since termed, having, in the first instance, been produced by accidental or designed inoculation of the matter afforded by a peculiar disease affecting the udder of a cow, could be propagated from one human subject to another by inoculation, rendering all who passed through it secure from the small-pox. He made known his discovery to some medical friends, and in the month of July, 1796, Mr. Cline, Surgeon to St. Thomas' Hospital, introduced vaccination into the metropolis. The practice of vaccine inoculation was adopted in the army and navy, and honors and rewards were conferred on the author of the discovery. The diploma constituting him doctor of medicine was presented to Jenner, as a tribute to his talents, by the University of Oxford. He was chosen a Fellow of the Royal Society, and of other learned associations; and a parliamentary grant was made to him of the sum of £20,000. The extension of the benefits of vaccination to foreign countries spread the fame of the discoverer, who received several congratulatory addresses from continental potentates. He died suddenly, in consequence of apoplexy, January 26, 1823, and was interred in the parish church of Berkeley. Doctor Jenner was the author of an Inquiry into the Causes and Effects of Cow-pox (1798, 4to.); and Further Observations on the Variolæ Vaccinæ, or Cow-pox, besides various letters and papers on the same subject, published in periodical works."

LOUISVILLE, KY., December 25, 1873.

TO THE MEDICAL PUBLIC,—A certain handbill, with the caption "E. S. Gaillard and the Louisville Medical College," over the signature of R. A. Kinloch, M. D., Dean of the Faculty of the Medical College of the State of South Carolina, has been circulated through this city for some days; having

been distributed, by hand, by certain well-known enemies of the Louisville Medical College, as well as through the mail.

And whereas, this handbill is evidently a labored attempt on the part of its authors to divert attention from the just and legitimate criticism of their College, by an independent Medical Journal, owned, controlled and edited by Dr. E. S. Gaillard, by false representations as to the relationship of the said Journal to the Louisville Medical College, it is due to all parties concerned, and especially to the cause of truth, that the Faculty of this College publish these facts; viz., that Dr. Gaillard's Journal is absolutely independent of this College; that the College has never contributed one cent towards its support; that it exercises neither control nor influence over its management; and is in no way responsible for its utterances.

The attempt to silence or disarm the criticisms of this Journal, by attacks upon this College, is not only unethical, but cowardly; and the handbill in question being evidently an attempt of this sort, we are compelled to regard, both its authors in Charleston and its distributors in this city, as skulking calumniators, who vainly hope to escape the just arraignment of an independent public journal by addressing themselves to the supposed cupidity of his associates in this College; trusting that these associates, to prevent injury and insult to themselves, may be driven to invoke the forbearance of the editor, for the sake of the Professors. But as we have neither ownership in this Journal nor control in its management, there is no more propriety in holding us responsible for its criticisms or opinions, than there would be in thus holding any other Body of medical gentlemen here, or elsewhere; and we now declare that no attempt to injure this College, by visiting upon it the resentments brought into existence by the criticisms of the "Richmond and Louisville Medical Journal," can influence us otherwise, than to arouse feelings of pity for the meanness of spirit which can inspire such cowardly subterfuge.

We confidently challenge the closest scrutiny into the policy and practice of this College, and pledge ourselves to satisfy all fair and legitimate questioners that its entire practice has been as dignified and as honorable as its career has been successful.

J. M. KELLER,
Prof. Surgery Louisville Medical College;
H. M. BULLITT,
Prof. Institutes, Medicine and Hygiene;
JOHN A. OCTERLONY,
Prof. Mat. Med. and Therap. and Clin. Med.;
J. GOODMAN,
Prof. of Obstetrics;
C. W. KELLY,
Prof. of Anatomy.

NOTE.—Voluntarily prepared by the Faculty and sent for publication.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

"Judex damnatur cum nocens absolvitur."

A HAND-BOOK OF THE THEORY AND PRACTICE OF MEDICINE. By FREDERICK T. ROBERTS, M. D., B. Sc. M. R. C. P., Fellow of University College; Assistant Physician and Teacher of Clinical Medicine at University College, London, etc. Philadelphia: Lindsay & Blakiston. 1873.

This is an American reprint of an English work. By rare good fortune, there is no American editor; *laus Deo.* It is confessedly intended chiefly for students, and is so written as to be, in many of its chapters, more a compendium of lectures than an independent and elaborate treatise on the subjects selected. With all of these manifest disadvantages for a work offered to the general medical public, it is nevertheless well worthy of the study of physicians; indeed, it presents many peculiar features and many excellencies which, it is believed, will make it a favorite, both with the accurate student and the busy practitioner. The author has had ample experience both as a didactic teacher and clinician.

The chapter on general etiology could be omitted with advantage; indeed, general etiology, so often introduced into text-books and sanctioned by the example of such writers as Williams, Chomel, and others, is very unsatisfactory; it is too vague and indefinite for the practical physician. It is to the practitioner desiring specific information, very much like a treatise on the trajectory of missiles to the soldier who is seeking to be informed as to the best manner of managing his artillery; the teaching is too vague and general, and not to the point. The same remark may be made in regard to the chapter on general symptomatology. These chapters are generally but not specially useful. They are, however, short and comprehensive. The chapter on dropsy contains much valuable information, but the complication and symptom recognized as dropsy could more

profitably be studied in connection with the many diseases offering this peculiar result. The subject of hæmorrhage is well and briefly treated.

On the subject of inflammation, the author deserves special commendation. It is really a relief to see that there is one text-book writer who has the courage to state what he thinks, and to write clearly and definitely on this subject. Authors on medical and surgical works, during the past eight years, have carefully avoided committing themselves in regard to this matter. They have, as a rule, evaded the question, and have been afraid to declare their own convictions in regard to it. Surgical writers refer their readers to works on general pathology; and medical writers, determined to be equally astute and noncommital, refer their readers to works on surgery!! In all this confusion, want of independence, and abject fear, it is a relief to find somebody who has sufficient nerve to declare what he believes to be the truth. The author accepts fully the views of Recklinghausen and Cohnheim; he regards effusion as a physical rather than as a vital phenomenon; and believes suppuration to be a simple catalytic change taking place in the intra-vascular material which has become extra-vascular in its relations. The treatment of inflammation is well and briefly discussed. The author very welcomely represents that judicious class of practitioners who, avoiding the extremes of antiphlogistic heresies on the one hand, and the equally insane practice of routine hyper-stimulation on the other, is willing, under all circumstances, to treat the patient and not the disease presented. The treatment generally advocated by him is eminently orthodox and satisfactory.

Among the few writers now accepted as authorities, the author of this work essays to reflect the actual condition of modern scientific light in regard to tissue changes. The old and vague term hypertrophy is repudiated, and the reader is aided in making a true and accurate distinction between hyperplastic and heteroplastic processes; he is taught to make a clear distinction between these different tissue conditions, which have but one

point in common, that of increase of bulk, or what is vaguely termed hypertrophy.

The different degenerations are well described and explained, and the chapter on atrophy is a very fair exposition of this interesting subject, as given by Paget, Billroth, and others.

The chapter on pyrexia is well written and embraces much practical information in brief space. Typhus and typhoid fevers are defferentially diagnosticated and well described. Both are regarded as contagious. His thermometric data as guides to diagnosis are familiar, of course, but they are more clearly presented than usual. His explanations are more brief, but more lucid than those given by Ringer or Aitken.

In regard to the etiology of yellow fever, the author fails to give an opinion; and, like most practitioners, he has no special treatment to offer. He has no confidence in the calomel and quinine treatment, so popular, and seems to think it best to treat each case according to the symptoms most prominent. The portability of the poison of this fever he regards as a demonstrated fact.

To the discussion of the nature of malaria, he, with rare wisdom, devotes exactly two pages, and the reader rejoices at this revolution in the method of presenting this subject in a work on the Practice of Medicine. Instead of the endless farrago of nonsense and the "learned lumber" presented by so many in connection with this subject of malaria, there is in this work a simple recital of a very few facts, generally admitted to be practical and useful. If there be a tenable definition of stupidity, it is the reckless consumption of a reader's or listener's time, by a writer or speaker, with the recital of the endless mass of familiar and historical dicta in regard to malaria. This whole mass is about as valuable as the brain of the mental dyspeptic who, in thus disgorging himself of such worthless ingesta, imagines that he is a professional Solon or a medical Solomon; while his listeners or readers regard his feat with about as much admiration, as they would the squeezing of water from an engorged sponge, or the ejecting of minced meat

from the mouth-piece of a plethoric sausage-stuffer. There is this similarity between the man, the sponge, and the sausage-stuffer; each is delivering unchanged the material which has been received, and if there be any advantage in the comparative merits of the three, this will be universally conceded to the sausage machine; for the material which it delivers is at least useful, and is equally imposing. Malaria is, in this work, as it should be, briefly discussed and promptly dismissed; for its cause, nature and laws, like the disquisitions of its self-appointed expounders, are about as incomprehensible as American strategy in the "Modoc War," and as obscure as a farthing light in the fogs of Newfoundland.

The author still clings to the lactic acid theory of rheumatism, and accepts the alkaline treatment as the best. The familiar statement, that injections of lactic acid into the blood produce symptoms of rheumatism, is given, but, in common with all authors, he fails to appreciate the fact, that these symptoms are cardiac, and not arthritic in character. It is remarkable that this old assumption of Prout and Headland in regard to the lactic acid conversion is still believed by so many, when it has never been demonstrated to be true; when such demonstration is impracticable; when the phenomena claimed to be due to lactic acid injections are confined to the endo-cardium only; and when the alkaline treatment fails to give as good results as several others, in which there is no effort made to neutralize this hypothetical lactic acid poison. The author does not give the percentage of cardiac complications in rheumatism. Is not the English percentage of one half, as given by Watson and others, greater by far than that observed in America? In connection with rheumatic endo-carditis, the author calls attention to the interesting fact, that debility of the musculi papillares may produce a mitral-regurgitant murmur removable by the use of digitalis; a fact but little known.

The chapter on syphilis, unusual for a work on Practice, is very good, and reflects the most recent views upon this subject.

In regard to cholera, the author, in common with all who are not imbecile or monomaniacal, believes the disease to be due to a specific portable and infectious poison. He is no believer in the views first advocated by Parkes, then by Dr. J. G. Johnson and Sir Thomas Watson, that "the eliminative" is the proper treatment for cholera; and while he believes that at first a mild dose of castor oil may be useful, as it is often useful in simple diarrhœa, he, in common with most practical and judicious physicians, wholly repudiates the castor oil eliminative treatment which has in recent years been made so notorious. Indeed, the many post-mortems recently made (showing that the lungs in many instances manifest no contraction of the pulmonary artery or its branches, and that in many cases the lungs are often engorged with blood) give the *coup de grace* to the eliminative practice, but a few years since so notorious and plausible. The author, in the enumeration of the many causes given for cholera, makes no allusion to malaria, and has evidently never heard of the few medical lunatics who attribute cholera to this mystic agency. The germ theory and the theory of propagation by bacteria and other parasites, he regards as unsatisfactory, and very properly regards the researches of Lewis and Cunningham as conclusive on these points. Pettenkofer's views in regard to subsoil water, he mentions, but he neither condemns nor accepts them. The recent differential guides, albuminuria and tube casts in the urine, are not mentioned. In any suspicious case of disease, he advises that "it is safer to consider it one of cholera." Certainly very bad advice, and one which, if adopted, would induce frequent panics and injurious sensational statements on the part of the sensational charlatans of the Profession. Genuine cholera is soon enough detected; it produces sufficient alarm and sensation, and it is bad advice for an author to give, when he recommends all suspicious cases to be regarded as cases of cholera. The Profession should, on the contrary, punish with unsparing rebuke all of its members who, to gain some little notoriety, needlessly and recklessly alarm communities, whenever suspicious cases occur

in their practice. On the subject of treatment, the author is exceedingly judicious and commendable. Thorough disinfection and strict attention to diet, he regards as always essential prophylactic measures. In common with all sensible men, in or out of the Profession, he condemns unsparingly that silly advice, so often given, as the result of which so many imprudently indulge in a diet that soon sends them to the cemetery. The treatment of cholera he naturally adapts to the stages of the disease, and while, with all physicians, he regards opium in the premonitory, or even in "the evacuation stage," as excellent, he regards its use subsequently as wholly inadmissible, and its prescription for popular use in cholera pills and potions as deserving of unsparing censure. Rest in bed, diet, opiates, and carminatives for the first stage; stimulants of all kinds, the free use of ice water, iced champagne, transfusion in the second stage; with calomel, diuretics and diaphoretics in the third stage, constitute the general treatment advised. Belladonna and its alkaloids are not mentioned. The mortality he gives as being from twenty to eighty per cent; this is not in accordance with the general testimony upon this subject; it is rare for the mortality to be as low as twenty, or as high as eighty per cent.

In the treatment of dysentery, the author is an enthusiastic advocate of the use of ipecacuanha in moderately large doses; twenty to thirty grains in a very little water, followed by complete abstinence from liquids for three or four hours, with absolute rest in bed and careful diet. In chronic dysentery he has but little confidence in medicinal treatment, either by the stomach or rectum; caustic injections or applications, he, strangely enough, does not mention. His chief reliance is upon diet and rest.

In intussusception of the bowel, he regards gastrotomy as only admissible when the case seems otherwise hopeless, and rejects this method of relief in cases of intussusception of the small intestines; strange views for an old clinician.

Jaundice he regards as due chiefly to obstruction, and he re-

jects the view so often advocated of its being due to the conversion of the hæmatin of the blood into bile pigment, with an accompanying torpidity of the liver. The cause of jaundice in pneumonia the author fails entirely to comprehend, and his idea that it is due to non-æration of the blood is not only erroneous, but even comical; the manifest cause, viz., venous engorgement, from the obstruction offered by the consolidated lung, one would expect to be familiar to so experienced and competent a teacher.

In the treatment of pneumonia, the author avoids both routine stimulation and the use of antiphlogistics. His judgment is evidently based upon large experience. Counter irritation by turpentine stupes, with poultices; the derivative treatment; moderate use of quinine; with subsequent stimulation, if necessary, seem to be his chief reliance. Venæsection, calomel and antimony he rejects. With digitalis, aconite and veratrum, strange to say, he has no experience.

In pleurisy, he advocates the modern treatment of early thoracentesis should effusion occur in any appreciable quantity. The aspirateur he does not mention in this connection, and makes no distinction between the treatment, medicinal or instrumental, of effusion and empyema.

In regard to tubercle, the author, like every one else, "is at sea." He does not know what to think or say. Strangely enough, he makes no distinction between hyperplastic tubercle (lymphoma, tubercle artificially induced) and the heteroplastic tubercle due to congenital or hygienic causes. He can not determine whether tubercle of this latter kind is miliary only in character, undergoing subsequently caseous, or fatty degeneration; or whether the gray and yellow tubercle are different in cause, nature, and results. Who can tell? His treatment of tuberculosis is that usually adopted. He is very partial to Dobell's Pancreatic Emulsion. In enumerating health resorts, he ignores Colorado, Minnesota, Mexico, Florida, and the West Indies. Indeed, America, North and South, are (inexcusably)

to him, evidently the terra incognita; and American physicians seem to be unknown to him.

Phthisis pulmonalis, he regards, very properly, as being often due to the caseous change taking place in inflammatory deposits; as indicated by Addison and Williams, and, most prominently and satisfactorily, by Niemeyer.

In connection with the subject of whooping-cough, no mention whatever is made of the germ or parasitic etiology now so popular, nor of the treatment by quinine and other parasiticides. Diphtheria he regards as eminently contagious. His treatment is the supporting treatment, with the local applications of nitrate of silver; this last method is now condemned, very properly, by most physicians.

He fails to draw any clear lines of demarcation between scrofula and tubercle.

Cancer he does not believe to be due to local causes. Epithelioma is, however, included in his classification of cancers.

In the treatment of gall-stones, he repudiates all of the so-termed solvents; turpentine, ether, chloroform, succinate of the hydrated peroxide of iron, alkaline waters, choleate of soda, etc. He thinks that many of these agents "do a great deal of good," but that they can not be accepted as solvents of cholesterine.

The author introduces pancreatitis as one of the inflammations. He gives its diagnosis, which is very vague; and the treatment is simply to treat the symptoms. Jaundice, without obvious cause, he regards as the most reliable symptom!!

In regard to Addison's disease, he has nothing special to say. He has not heard of the epidemic of this disease, which suddenly appeared in the practice of a certain Louisville physician, and suddenly disappeared, as soon as this physician ascertained that the disease never assumed an epidemic form.

His classification of chronic Bright's disease is remarkable for its simplicity; the large, smooth, white kidney (chronic tubal nephritis); the granular, contracted, or cirrhotic kidney (chronic interstitial nephritis); the fatty kidney; the lardaceous

kidney. This portion of the work is most concisely and carefully written.

In regard to cerebro-spinal meningitis, the author has nothing to offer of novelty or importance; he regards its etiology as vague; its symptoms protæan; its treatment very unsatisfactory; its mortality from 20 to 80 per cent.; its communicability never demonstrated. He mentions nothing of the Baltimore discovery, that the fulminant form of the disease is closely allied in its symptomatology to poisoning by tartar-emetic.

An admirable feature in this work is the careful exposition of the important features of physical diagnosis and clinical thermometry. While the thoracic topography and the technology adopted by him differ somewhat from the topography and the technology generally used in America, the portion of the volume devoted to physical diagnosis is carefully and most commendably written.

It will be found a most welcome addition to the volume, and is a tacit rebuke to those authors who omit this most necessary portion of a work on Practice. Their reason for doing so is as incomprehensible as was the testimony of New York physicians in the Stokes and Richardson trials, or as the action of Baltimore attorneys in summoning Drs. Reese and Wood as experts in toxicology. A century ago, before physical diagnosis became a science, it was the custom of most authors to omit all reference to physical diagnosis; and their successors, with strange docility, follow abjectly in their footsteps. Really, the making of works on Practice seems to be like the making of bricks; some master workman makes the mold, and his followers make their material conform to its outlines.

The section on thermometry is valuable and practical. It will be appreciated most fully.

In this hastily-written review, the attention of the reader has been chiefly directed to points at issue; while routine descriptions and advice have been omitted. There are great excellencies in this volume. It is concisely written. The in-

formation given is extensive, varied, and well arranged. The descriptive is perhaps too brief, but this, while objectionable to some will be particularly welcome to others. It is just to the author and to the Profession that this work should be warmly commended. It is well issued.

I. Body and Mind — Psychological Essays. By Henry Maudsley, M. D., Professor of Medical Jurisprudence in University Medical College, London. London: MacMillan & Co. 1873.

II. Illustrations of the Influence of the Mind upon the Body in Health and in Disease. By Daniel Hack Tuke, M. D., M. R. C. P., Lecturer on Psychological Medicine at the York School of Medicine, England. Philadelphia: Henry C. Lea. 1873.

The difficulty with all discussions of the nature of those treated by the volumes before us, is one inherent in the language of human intelligence. Language is but the regulated method of communication, words but the signs of ideas. A word is as much a sign as the representation of a figure, the only difference being that as one addresses itself to the memory through the eye, so the other presents itself through the ear. In both cases it is the memory which vivifies the object to the general intelligence of the mind.

Our appreciation therefore of either sign would depend entirely on past experiences of the fact, and as it is physically impossible for any two persons to observe the same fact from exactly the same standpoint, so it is a mental impossibility for any two intelligences to attach exactly the same signification to the same word.

It is therefore idle to expect any two people to *exactly* agree upon anything; and logic, instead of being the science of thought, would be better defined as the science of disputed definitions; and agreement means approximation. Especially is this the case when grappling with the hidden functions of the mind. These understood only by what we may call circumstantial evidence, and entirely hidden in its direct workings,

require that we should the more carefully investigate such particulars of physical action as are submitted to our examination by nature. Therefore the value of such an aggregation of facts as are in these volumes.

The ancient belief which converted everything mysterious into divinity, and apportioned intelligences as motive powers among all the unknown, had, after apportioning Fire, Earth, Air, and Water among salamanders, gnomes, sylphes, and undines, attributed to certain organs the control of certain mental functions. The heart was the seat of love; the liver of anger; the reins of lust, and the brain of thought.

It is a strange fact as illustrating the existence of a certain degree of self-perception, and intercourse, that among all peoples, even those most remote, have these ideas prevailed, and of the same particulars. That the physical perceptions and feelings may have had something to do with this, is true; but in a small measure there is something more than feeling required to locate anger in the spleen, or thought in the brain. This latter has never changed. From this we passed to the belief of a general pervading intelligence, controlling the functions of each organ, but having its capital in the head among the mysteries of the brain.

Latterly, however, the sun seems to be rising whence he came in another morning, and the adoption of the theory of specific organ intelligence is but an extension of the old idea of locating the emotions.

When therefore we speak of the influence of the mind upon the body, we are at once met by the question, *What is the difference between the body and the mind?*

These gentlemen, however, do not propose to answer this question in their books, or to open even so slight a door for discussion, necessarily fruitless in any event.

They propose to discuss the question in its physical aspect as separate, as far as possible from the metaphysical question of what is commonly called mental philosophy.

It is time this view of the question was being taken. For

long ages has the physician consented to the doctrine, that his profession was only with the body, and therefore inferior to those who arrogantly called themselves mental philosophers. The whole question of mental powers, in all of its mysterious exhibition and relations, has been discussed by a set of scholiasts, in some cases, ignorant of the first principles of anatomy and physiology, and who had first to invent a gibberish of terms in which to record their discoveries. This invention has been followed by such results as might have been anticipated. Endless volumes, filled with "thrice refined pabulum of transcendental moonshine" written in an incomprehensible language, and jargonistic discussions extending over centuries are the sum and substance—the tree and fruit of their genius. They have both sowed and reaped—*the wind!*

In no branch of knowledge has there been so little advance. There has been here purely motion without progress. In all other departments has thought after thought flashed starlike upon the darkness, adding light upon light to our knowledge. In all others, we can point to great minds as discoverers of great truths which yet remain with us. We weigh worlds with Newton, or "bind the sweet influences of the Pleiades with Copernicus; we dissect light with Young, or explore burning planets with Fraunhöfer.

But alas for the highest prerogative of human intelligence—"the monarch thoughts' dominions, the kingdom of the mind!" Here are inventions without discoveries; like the "mark-time" of soldiers, much shuffling of the feet without much progress of the body. There are no lights here; "the wind bloweth where it listeth, and no man knoweth whence it cometh or whither it goeth." It is meagre diet, this "filling the belly with the East wind" since Job's time.

Therefore, these books can claim at least to be a move in the right direction, and we welcome them with the cordial greeting due the first born. They are the result of a general revival of the instructive philosophy which is stimulating the mind of the century. It is a glorious renaisence; an age of steam and

electricity; of mind and body. The barren altars, around whose cold and mysterious shrine we have so long shuddered in nameless horror and confusion, are now lighted and warmed by the presence of its discovered deity, and Nature owns and rewards her worshipers.

In no department of knowledge has this advance been greater or more marked than in general medicine. We will not rashly call upon the great names in the Profession. An infinite army of busy workers, advancing on the same track, have salient points, reaching in measured gradation from the first to the last. All honor be to them both high and low; and we hail with joy these indications of the growing perception of the paramount importance to the human race of the Medical Profession.

They have been improving from the barber chirurgeon and leech to the high development of the present day. They have struggled against the narrow limits which impertinence and ignorance have assigned them, to the foremost rank of the great army of thought. They have learned the great lesson, that Nature is one and can not be divided, and all acknowledge now that to the guardians of her highest gift of life should be confided the administration of her highest functions.

There is a medicine above drugs. Already the spirit of which these two volumes are the exponents, has rescued towns from the grave, whole nations from disease; then let us wait and work, hoping for the day when the same hand which plucked the lunatic from his dungeon and chain shall be able to seat reason on her throne and "minister to a mind diseased." M. P.

NOTE.—A prominent lawyer of Memphis.

ANNUAL REPORT OF THE FIRST KENTUCKY LUNATIC ASYLUM.

It appears that this Asylum is in great need of State aid. How the Institution could have been allowed to lapse into the condition discovered by the newly-elected Superintendent, Dr.

George Syng Bryant, is incomprehensible. Ventilation bad; water-closets insufficient; heating apparatus defective and deficient; water supply deficient; not water sufficient to prevent or control accidental fires; all the water used for cooking the food of over five hundred inmates to be carried by hand into the building; bathing and laundry facilities insufficient; library so worthless that "old exchanges from the press-rooms of the Lexington papers *sold* to the Steward furnish almost the entire reading matter of the Institution." Is not this a most surprising and discreditable condition for the oldest Asylum of this State; an Institution which has been the pride of the Legislature, and which it has fostered and desired to foster in every manner? Surely, if these evils had been made known, the Legislature would have promptly removed them, and no one can doubt now, that being made known, the Legislature will promptly, fully and generously provide for the peace, comfort and happiness of the unfortunates who must, for years, and perhaps for life, make this Asylum their only home. The present Superintendent is deserving of great commendation for the full and able manner in which he has made known the absolute wants of those entrusted to his care; and the Treasurer's report shows that the Superintendent has so administered the Institution, that while improving immediately and prospectively the comfort of his patients, he has an unusual balance left at the close of the fiscal year.

There are some curious facts in this report interesting to the general reader. Farmers and laborers (though working in the open air and enjoying full sunlight) constitute two-thirds of the number admitted during the past year. There are only four admissions from the class of society who study and are subjected to mental strain. Almost one-half of the deaths are from phthisis.* Elopements, contrary to what is believed in

* A strong argument against hospitalism in asylum architecture and management; one strongly suggestive of the benefits of the cottage system; in which, instead of hospital-like structures, with unwise aggregation, bad atmosphere and bad ventilation, the patients, under one superintendent, are distributed into cottages.

regard to the fair sex, seem to be chiefly among the males; the proportion being, in 49 years, 133 males, and only 17 females. Marriage seems to exert no peculiar effect; the married and unmarried being admitted in almost equal proportion; mania, acute and chronic, and melancholia are the chief forms of mental trouble; the average time spent in the Asylum is five years; the average age at death is 40 years. The fruits, flowers and vegetables are furnished from the Asylum gardens, being cultivated by the patients. This Asylum is over-crowded, and demands relief. It is difficult to induce the clergy to hold religious services for the patients, who are, to a great extent, thus inexcusably neglected. It is to be hoped that this old Institution will be so aided by the Legislature this winter as to make it a home indeed for its unhappy inmates. Can not each one who reads this notice send to this Asylum (at Lexington, Ky.,) one agreeable volume; bringing thus, in turn, endless pleasure to those who so much need something to "minister to the mind diseased;" something to "pluck from the memory a rooted sorrow?" Is it not injudicious to publish, as has been done, the names of the inmates; and, above all, the names of those who are pensioners upon the State's bounty?

MEDICAL NEWS.

'Nulla dies sine linea."

Dieulafoy, the inventor of the Aspirateur, thus writes: "I consider it a grave error to empty at one operation ovarian cysts, cysts and abscesses of the liver, the pleural sac, or large purulent collections in the cellular tissue; it is necessary to know when to stop, to proceed slowly, with patience, without producing shock, to perform five, ten, twenty, or a hundred aspirations; these are the true conditions of success."—*N. Y. Med. Jour.*———*Appointments, Honors, etc.*—Dr. Edward S.

Dunster has been appointed Professor of Obstetrics in the University of Michigan.—Amherst College has bestowed the title of LL. D. on Dr. Nathan Allen.—James Johnston, of Indianapolis, has endowed the Medical College of the Northwestern Christian University (Indiana) with half a million dollars, and a site for its location.—Dr. Boll, private teacher and assistant in the Physiological Laboratory of Berlin, has been appointed Professor of Comparative Anatomy and Physiology in the University of Rome.—Dr. Sharpey, of London, had recently a narrow escape from death, caused by taking inadvertently a solution of atropia for quinine.—It is reported that Mr. Jonathan Hutchinson has sent in his resignation as Surgeon of the London Hospital, a post he has held for the last ten years.—Dr. Robert Druitt has been elected a Fellow of the Royal College of Physicians.—*Ex.*———*Death from the Inhalation of Ether.*—At the South Hants Infirmary, Southampton, a lad of fourteen years was put under the influence of ether for operation on the eye. Just before the operation, the pulse was felt to falter. The inhalation was discontinued, the pulse recovered, and the operation performed without further inhalation. Directly after the operation, the pulse and respiration ceased simultaneously. Restorative means were resorted to, and at first with some success, but in a few minutes the boy was dead. The post-mortem revealed nothing. The ether was administered by means of a cone. The quantity used is not stated, nor is any allusion made to its quality.—*Ex.*———*The New York Laryngological Society.*—The object of this Society is the monthly association of professed laryngoscopists of New York and vicinity for the "promotion of the study of affections of the larynx, pharynx, and adjacent parts."—*N. Y. Med. Jour.*———*Medical Students in London.*—The total number of students pursuing medical studies at the eleven metropolitan hospitals of London, as shown by the registration which closed October 15th, is sixteen hundred and eight. This is an increase of one hundred and ten over the registration of last year. The attendance at the provincial schools throughout

Great Britain is also larger than usual.—*Ex.*———*The Medical Society of Wheeling.*—At the last meeting of this Society, the following officers were elected for the ensuing year: President, Dr. E. A. Hildreth; Vice-President, Dr. James Cummins; Secretary, Dr. S. L. Jepson; Treasurer, Dr. J. C. Hupp; Censors, Drs. John Frissell, W. J. Bates, and R. W. Hazlett.—*Ex.*———*An Egyptian Hospital.*—It is announced that the Khédive of Egypt is about to construct a hospital at Emirghian, on the Bosphorus. The Institution is intended to be a model one of the kind. The women are to have a pavilion separated from the men, and the plans provide for the complete isolation of one of the wards—that for contagious diseases—without interfering with the working of the rest of the establishment.—*Ex.*———*Geographical Puzzle.*—The "London Medical Times and Gazette" of October 25th gives the following curious piece of news: "The fever in Memphis, New York, has so much subsided that the quarantine restrictions have been removed.—*Ex.*———*The Cholera in Berlin.*—Up to October 13th, 938 cases of cholera had been reported at Berlin since the breaking out of the epidemic. Of these, 628 were fatal, 223 recovered, and 97 remained under treatment.—*Ex.*——— Cholera dejections and vomit in the Dresden Hospital are received in a mixture of saw-dust and charcoal, on which petroleum is then poured, and the mass burned.—*Northwestern Med. and Surg. Journal.*———Coste, the celebrated naturalist, was almost sightless at the time of his death, having destroyed his vision with the microscope. At the time of his death he was sixty-six years of age.———It is proposed in Italy to erect a monument to Eustachius. Few anatomists have had their trumpet so much blown.—*Bost. Med. and Surg. Jour.*——— *Women Dentists in Egypt.*—Dr. Edward Warren writes from Cairo, in Egypt, to a friend in Baltimore, that there is "a good opportunity for women dentists in Egypt, as in the East women are forbidden to consult with men."———Dr. C. C. Graham, ninety years of age, entered our town last Saturday afternoon, having walked from North Benson Depot, and zigzagged the

creek for more than ten miles, packing a heavy load of fossils, which he gathered by the way for the museum belonging to the Kentucky free library of Louisville, which he is building up. The Doctor was born in 1784, in a fort, surrounded by savages and wild beasts, and has lived to see the vast West, to the Pacific ocean, grow up with a swarming population. He has slept under the same roof with Boone, Clark, Harrod and Ray, and from his present appearances and vigor of mind and muscle, may live twenty years yet.—*Frankfort (Ky.) Yeoman.*——— Dr. Ben. S. Gillespie, a native of Kentucky, and medical inspector on General Preston's staff during the war, died lately at Helena, Ark.—*Exchange.*———During the quarter ending the 31st of March, the births in Ireland numbered 38,885, the deaths 30,883, and the emigrants 12,726. This shows that the population of the country is decreasing at the rate of 19,000 per annum.———A Colorado paper quotes an instance of the restorative effects of the climate of that State. It says an Ohio lady, who could not sweep her room at home, after her arrival in Colorado, was able to chase her husband a mile with a pitchfork, when she caught him walking with a pretty neighbor.—*Exchange.*———A hospital surgeon, who gave medical advice through the columns of a newspaper, has been severely scored by the English medical press.—*Exchange.*———Dr. Lyon Playfair has been appointed Postmaster-General of Great Britain and Ireland.—*Exchange.*———*Death from Ether.*—The wife of the cashier of the Freight Department of the Old Colony Railway, died in a dentist's office, in Boston, on the 10th of last month, while under the influence of ether. Only a small quantity had been administered, when she was seized with a convulsion and died.———*University of New York—Medical Department.*—We learn that Professor Henry Draper has resigned the Chair of Physiology in the Medical Department of the City of New York, and that Professor J. W. S. Arnold will give the lectures on that subject during the remainder of this session.—*Exchange.*———Dr. Stellwag von Carion, the eminent ophthalmologist, has been appointed to the additional pro-

fessorship of Clinical Ophthalmic Surgery, instituted in the University of Vienna.—*Exchange.* ——— *Deaths.*—Dr. Thos. Miller, who died at his residence in Washington, District of Columbia, on September 29th, was born in Port Royal, Virginia, in 1806, and graduated at the University of Pennsylvania in 1829.—Sir Henry Holland, whose death has been recently announced, was born in 1788, and took his medical degree at Edinburgh in 1811. The greater part of his professional life was passed in highly aristocratic circles, and he was always a prominent physician and an ornament to society.—We regret to have to announce the death of Dr. Coste, a distinguished confrère, at his residence near Gacé Orne. Doctor Coste was in his sixty-sixth year.—*London Lancet.* ——— *Electric Light.*—A company in Paris are now making an improved electrical machine for producing the electric light. It is provided with four plates, and when made to revolve three hundred and fifty times per minute, affords a light equal to two hundred and thirty or three hundred gas-burners. A steam-engine of two and half horse-power serves to run the machine, which costs the nice little sum of 8,000 francs ($1,600 gold). This is not so very expensive, when we remember that a few pounds of charcoal will produce as brilliant an effect as could be had from twenty pounds of rape-seed oil. The light is well adapted to light-houses, ships, and large halls; and why not for lighting city streets? A few of these scattered about the city would greatly relieve the dangers attendant upon a gas strike. —*Journal Applied Chemistry.*——*Lying-in Hospital at Jerusalem.*—This hospital, established by the Baroness B. de Rothschild, is doing excellent work. Dr. London, the director of the Institution, lately issued a report, from which we find that 120 females were received at the hospital during the past year; 48 of these were born in Jerusalem, 24 were Russian born, and 19 came from various parts of Turkey. Each inmate, on leaving, receives a donation of ten francs, and clothing for herself and child. The early period at which marriage is celebrated in Palestine is shown by the fact that two of the mothers were

only fifteen years of age; five, seventeen years; nine, eighteen years; four, nineteen years; and fifteen had reached their twentieth year.—*Lancet.*———This number contains 146 pages. The "New York Medical Journal," for January, "the largest medical monthly published," (!!!) contains 112 pages.

EDITORIAL.

"Nullius addictus jurare in verba magistri."—Hor.

VOLUME SEVENTEEN.—In August, 1865, soon after the termination of the late war, the editor of this Journal, sitting in his office at Richmond, Va., meditating on the utter ruin of the recent past, the extreme trials of the present, and the almost prospectless future, was visited casually by a friend, and asked why he did not publish a medical journal. The answer was easily given; because he had never for a moment entertained such a thought. The friend left, and in a half hour returning, found that the work of creating this Medical Journal had already been commenced. How little conception there was at the time of the magnitude of the undertaking can best be appreciated by the statement of a single fact; the work was commenced with a capital of less than fifty dollars. It was, however, thus, then and there commenced. From that period to the present, the labor of conducting it has been inexpressibly severe and onerous, and the anxieties attending it endless, and often oppressive. At the present time, this advice can be honestly given; if any one desires or contemplates undertaking such a work, he is earnestly enjoined not to do so. Constant labor; constant anxiety; constant thought; unwearying energy; misconstruction of almost every sentiment and act; hosts of enemies; insidious and concealed hatreds; these are the price one must pay for any success in this field; while failure is almost the absolute rule for all who embark their precious hopes in this most dangerous of all undertakings. There is, of course, one great reward, the friendship of very many true

and noble men; this is, indeed, a rich and precious reward, and those who enter upon so perilous and painful an undertaking may be thus most welcomely remunerated; but as to all else, no return, however pecuniarily munificent, can repay one for the ceaseless trials, endless labors, and frequent sacrifices inseparable from such an avocation.

To successfully establish a large and profitable journal is certainly a source of great pleasure, but no pecuniary reward can repay one for the sacrifices which secure such a result.

With the commencement of the new year, there is now issued the first number of volume seventeen; the first number of the ninth year of publication. During this long period, the Journal has secured hosts of warm friends and devoted supporters; gentlemen to whose generous labors and great influence, the work is chiefly indebted for its prosperity and success. It has, however, in the same period, made hosts of enemies; some brave, open, and manly; but many insidious, cowardly, and treacherous. Many friends have curiously enough asked how this result was produced, and why a journal can not be so conducted as to avoid making enemies. Such questions are, of course, asked without reflection. The answer is easy.

The private citizen who makes no enemies is usually the man who either has no opinions, or is afraid to declare them. All other persons must induce feelings and acts hostile to themselves. Radical differences of opinion may, theoretically, be settled without asperity, without the engendering of hostility and enmity. This is the hope of the Optimist; the dream of the Utopian; the prayer of the Christian; it is not, however, the practice of men, nor is it the general testimony of history. What are the manifest and historical results of the open and honest declaration of irreconcilable differences of opinion; bitter schisms in the church; multiform courts of justice; endless political creeds which, in their observance, make giants of some nations and bankrupts of others; sanguinary revolutions; deadly wars. Such are some of the familiar results, even where there is imposed no positive obligation to declare openly and

publicly opinions. What must be the intensified result where there is a manifest obligation devolving upon one to always publish what is believed to be the truth? What must be the logical result of such a course with a journal, unless it is so conducted as to forfeit the respect and deserve the contempt of every honorable man? An old Roman aphorism commences with this fascinating advice to public men laboring in the fields of literature, "*Pax et scientia*"; be devoted to the charming cultivation of peace and science; but this same beautiful aphorism thus beautifully closes, "*Sed veritas sine timore*"; but let the truth be spoken without fear. If a journal adopts this almost inspired sentiment, how can it fail to draw upon itself the enmity of those who must, manifestly, be often criticised with censure; often with condemnation. Again, no one fails to admire the motto so long the noble guide of the "Edinburgh Review"; "*Judex damnatur cum nocens absolvitur*"; the critic should be condemned when the guilty escape. As criticism is one of the functions inseparable from a journal, and as the guilty must not infrequently be the subject of criticism, these can not honestly be allowed to escape; and if censured, their enmity is almost, if not always, inevitable. Enemies are born of honest criticism. It may be said, however, and it is often said, why pursue such a course; why criticise thus; why not do, as so many do, avoid or evade criticism; why not by facile eulogy, irresistible flattery and venal praise secure commendation? A journal may do thus, it is true; it may, like the Grecian artist, Zeuxis, paint only the beautiful; it may, with the amaurotic vision of royalty, see no vice; it may, amidst all of the many dangers threatening the peace, character and progress of medicine, "cry peace, when there is no peace"; it may crush the weak, but with the strong adopt the wily policy of that crafty Eastern philosopher, Fadladeen, "if the Prince at noon-day say it is night, declare that you see the moon and stars;" finally, like the politic courtier, it may never come before its patrons, unless with the honeyed words of praise. A journal may be thus false, unreliable and untrue, and yet, as history indicates,

it may reap an abundant success. Several journals do thus and succeed. Then say many, why not do likewise? The reply is easy. Most journals with such a history are almost sure to fail. Should they, however, succeed, is such success desirable? Many think that the reward is worth the price; many do not. Among these last, this Journal hopes always to be classed. Its course before its first issue was clearly determined upon, and this course has, under all the circumstances of enmity, misconstruction, and frequent pecuniary loss, been faithfully pursued. It has nothing, in this respect, to regret, and its course will be always the same. Public men, public institutions, public societies, and publications, all that appertains to the public of medicine, will be carefully, fairly and accurately reviewed. The Journal here again vouches for the accuracy and responsibility of its criticisms. It has frequently offered the test of bringing proof to substantiate the absolute truth of its charges, but, on all such occasions, those thus charged have villified the Journal, but feared to meet the test offered. Under all circumstances, the readers of this work may feel assured that personalities and the invasion of private life will be carefully avoided, but that all subjects for public criticism will be fairly and faithfully reviewed. The Journal will always cauterize charlatans (corporate or individual), and will maintain the rights and character of the Profession.

Harsh criticism is always painful to a writer; first, because it gives pain to others; and secondly, because it jeopardizes and often destroys that which all men, properly organized, love and value; the confidence, respect, esteem, and friendship of their fellow-men. Yet it must often be made, for this is not only the function, in part, of a journal, but a manifest duty which can not honorably be evaded. However painful such criticism therefore may be, it will always, generously but justly, be exercised in this work. If it induces enemies, so be it.

In the management of this Journal, there has always been a desire to be most liberal to its supporters. The best material is obtained. It is well printed. The Journal is often expen-

sively embellished. With a tacit contract to offer twelve numbers of 112 pages each annually, the supporters often receive the equivalent of thirteen, and even fourteen numbers. The future course of the Journal will be equally liberal, and the most strenuous efforts will be made to improve each department of it. With these necessary explanations as to the past and future course of the work, and with the best wishes of "a happy New Year" for each reader, the seventeenth volume of the Journal is herewith commenced, and the work is respectfully submitted, for another year, to the support and approval of its patrons.

BREVITIES.

The "London Lancet" has just celebrated its semi-centennial anniversary. Its bold and independent course made for it, in its infancy, hosts of enemies, and, in those early years, strong efforts by strong men were made to crush it, but it has survived all of these adversaries, and is to-day one of the great powers of the British Empire; while the cowardly, non-committal medical journals contemporaneous originally with it are dead and forgotten. The "Lancet" has deserved its success, and is now respected, courted, and feared, where once it was ridiculed and abused———The "Medical Archives" of St. Louis is dead.———The "Cincinnati Lancet and Observer" has lost its old editor, Dr. E. B. Stevens, who has for eighteen years conducted it with efficiency and ability. It will be edited hereafter by Dr. J. C. Culbertson. May he do so with pleasure and success.———The "Atlanta (Ga.) Medical and Surgical Journal" has also lost its old editors, Drs. W. F. and J. G. Westmoreland, who originated the work, and successfully conducted it through long years of trial and adversity. They are succeeded by Dr. Robert Battey as chief editor and Drs. W. A. Love and V. B. Taliaferro as associate editors. These gentlemen are welcomed into the arduous field which they have entered, and are here offered the warmest wishes for their success. Dr. J. P. Logan, who has recently edited this Journal

with much ability, has also retired. ——— The "New York Medical Gazette," the "New York Medical World," the "Oregon Medical Journal," the "Michigan University Journal," have all, it seems, given up the ghost; so also have the Galveston medical journals, the last one of these having, as was stated, made provision for permanent life. What a commentary upon the hopes and beliefs of these worthy gentlemen who, as editors, labored so faithfully for a different result.——The "New York Medical Journal" is again being advertised as "the largest medical monthly published." These claims were so often, two years since, proved to be unjust and untenable, that they were abandoned. They have been again revived, and are now less tenable than ever. The publishers have issued twelve numbers this year, giving in all to their readers 1,336 pages. The "Richmond and Louisville Medical Journal" has furnished to its readers in the same period of time 1,602 pages, or 266 more pages than have been furnished by the "New York Medical Journal." To render this more plain, the "Richmond and Louisville Medical Journal" has furnished in its twelve numbers of the year 1873, a little more than fourteen numbers of the "New York Medical Journal." Yet the publishers of this last journal advertise it as the largest medical monthly published. What justice there is in such a statement, the Profession can now determine. But the publishers (D. Appleton & Co.) of the "New York Medical Journal," do not only mislead the Public as to the size of their work, but they assert, in their advertisements, that their "journal has, for many years, been pronounced the ablest medical periodical published." Apart from the bad taste of such a declaration, the statement is wholly incorrect. That journal is certainly excellent, but it is not superior, if equal, to the "Boston Medical Journal"; the "New York Medical Record;" the late "American Journal of Obstetrics"; the "American Journal of the Medical Sciences;" the "Chicago Medical Journal," and several others that could be named. It is simply marvelous that the editors of the "New York Medical Journal," Drs. W. Luske and James B. Hunter, gentlemen of

character, ability and position, can allow themselves to be placed in so false and indelicate a position. Brandreth, Morrison, Ayer & Co. may, of course, claim that their pills are the best, for all charlatans are expected to make such a claim, but for educated physicians to thus bulletin themselves, to allow their publishers to thus expose them to censure and ridicule, is indeed strange and incomprehensible. For the respectability of physicians and journalists, it is to be hoped that they will observe justice and propriety.———As some curiosity has been manifested as to the authorship of the review of Dr. Westmoreland's work on Acology, this review being published in the last issue of this Journal, it just to the author to give his name. Prof. J. A. Octerlony, of this city.———As some may have thought that there was harshness or injustice in the charges made in the last number of this Journal, to the effect that students at the Louisville Medical College were enticed away to the Medical Department of the University of Louisville, by offers of all the tickets of that Institution, for the beggarly sum of $5, the following extract, published in the daily papers of this city, is here furnished. It will be seen upon reading it, that the acts so recently censured in this Journal have been long known here, and that they have received such public censure as to induce the hope that they would be discontinued. The extract mentioned is as follows: "At a meeting of the entire Faculty of the Kentucky School of Medicine, the following preamble and resolutions were unanimously adopted:

"Whereas, The Faculty of the Kentucky School of Medicine have been authoritatively informed that the Dean (Dr. J. M. Bodine) of the Medical Department of the University of Louisville has been basely tampering with several members of their class, and by falsehood and misrepresentation has endeavored to seduce students from their studies and their honor, and has succeeded by bribes and otherwise in enticing some, by giving to them the tickets of the University gratuitously, or promising to do so; and whereas, the University of Louisville is an Institution receiving money from our own pockets, as well as from the pockets of every tax-payer in this city, which money is for the individual aggrandizement of the Faculty of said University, and not for the interest or advantage of the city; and whereas, the

Dean is presumed to be the representative of the Faculty; and whereas, such conduct is dishonorable to its authors, degrading to its students, and injurious to the interests of the city; therefore,

Resolved, That we denounce the action of the Medical Department of the University of Louisville as tending to disgrace medical teaching, dishonor the Medical Profession, make merchandise of medical students, and divert them to other cities and schools.

Resolved, That the Dean be instructed to publish the proceedings of this meeting. L. J. FRAZEE, M. D., Dean of Faculty.

To Dr. E. S. Gaillard and Mary E., his wife, December 29, 1873, a son, G. W. S. Gaillard. ——— The excellent likeness of Dr. Edward Jenner, in this number, has been obtained through the courtesy of Dr. J. D. Jackson, of Danville, Ky., from a picture in his possession. ———It is to be hoped that every physician, who can do so, will aid in securing a repeal of the law suspending admissions into the medical corps of the United States Army, and prohibiting promotions in the same corps. The recent law in this connection is unjust, odious, unwise, unsafe, and a wrong both to the medical corps and those whom this corps is called upon to protect. It ought to be repealed. ———Prof. Joseph Jones, New Orleans, is about to issue a volume of "Medical and Surgical Memoirs, containing Original Investigations on the Nature and Treatment of Various Diseases during a period of Twenty Years." The subscription price for the work is $5; for which small sum the purchaser will receive the valuable results of the efficient and faithful labors of a distinguished physician and thoroughly proficient teacher. ———How strange it is that European and American medical journals do not promptly and strongly advocate the proposition made by Dr. J. D. Jackson, (of Danville, Ky.,) of rearing a suitable monument to the memory of one so deserving of a monument, Dr. Ephraim McDowell, of Danville, Ky.; this monument, a fit token of their gratitude, to be erected by those females who have been successfully operated upon for ovariotomy. Why do not Sims, Emmet, Thomas, Peaslee, Atlee, Byford, Dunlap, Storer, and others, move in this matter? ——— Some conception may be formed as to the geographical area

throughout which this Journal is sent by examining the addresses of the original contributors to this number; they represent the following States, etc.: New York, Texas, Oregon, Tennessee, Virginia, Maine, Michigan, Alabama, Maryland, District of Columbia, etc.———The strongest contrast generally mentioned is that between day and night; there is, however, one much stronger than this; the contrast between the private and public letters addressed by Dr. R. A. Kinloch, of Charleston, S. C., to the editor of this Journal; in the first his language and spirit express only kindness, courtesy, respect, apologies; in the last he is rude, coarse, and vulgar. If he is truthful and honest in his late newspaper letters, he was playing the part of absolute hypocrisy in his private communications; and if in these last he was writing the truth, in his public letters he is now dealing falsely with the public. He may take his choice; he has been untrue either in his private or public letters. Their tone, spirit, and language are wholly irreconcilable. By his own language he is demonstrably false and untrue. He has publicly chosen the public for his jury; this testimony, therefore, belongs rightfully to them. Read on pages 90 and 114 of this number an exposure of the duplicity, hypocrisy, and falsehood of this unfortunate man.———Psychology, materia medica, and ornithology, in their relations to cholera, are thus ludicrously blended in one sentence by that polished writer and classical scholar, Professor Bowling, of Nashville, Tenn.: "We will show hereafter, that one brave, good man, with five assistants, did drive—literally drive—cholera out of the negro villages around our city when it was at its worst. But they carried hope in their faces, medicine in one hand, and chickens in the other; but ne'er a vegetable ne'er a time. If our New York friends think that we are disappointed because *they* didn't quote us, they made a great mistake; we have been 'roused' by their betters, and 'Can cock our nose aboon them a'.'"——Sir Henry Holland was grossly neglected in his latter days by his medical confrères of England, and when at last he died, but few physicians were present at the funeral obsequies. What a

commentary upon greatness! and upon humanity———It does not seem to be generally known, that "the bloodless method" of Esmarch is an old surgical device; the roller bandage, the tourniquet, and the elevation of the part to be operated upon, are devices for preventing hæmorrhage well known for generations past. Esmarch's method is substantially the same.———The address of Professor Erichsen before the University College deservedly receives great attention. He shows that the difference between the results of operations in hospitals and private practice is indeed fearful. His figures are most startling, and prove that hospitals are but the pathways to the cemetery. The percentage of deaths, after amputations in large hospitals (he shows by Simpson's statistics), has been 1 in 2.4; while the percentage of deaths, after amputations in private practice, is 1 in 9.2. Some of these interesting facts will be given more fully in the February issue. They are worthy of the most profound attention.———The Burlington, Iowa, papers announce the death of one of the oldest and most prominent physicians who ever left Kentucky to find his field of usefulness in another State; Dr. John T. Henry. He lived to a green and fruitful old age, dying after having passed his eightieth year, and retaining his faculties to the last. Dr. Henry was a colleague and warm personal friend of Dr. Daniel Drake, and lectured for many years in the Ohio Medical College. The largest meeting of physicians ever held in Burlington assembled after the death of Dr. Henry, in order to pay the last tribute of respect and affection to one so highly honored.———The Medical Department of the University of South Carolina has, as was expected, fallen into a condition betokening early death. It has been so Africanized, misruled, and mismanaged, that its best teachers have been compelled to resign. Profs. J. T. Darby, A. N. Talley, and R. W. Gibbs, have tendered their resignations, and the end of all this misrule may be easily anticipated. ——— Many thanks to friends sending lists of their medical acquaintances, to whom the Journal will be sent.

SUPPLEMENT.

Many publishers accept advertisements with the stipulation that the advertisers are to receive editorial notice. No such contracts are made by this Journal. Editorial notices, if given, are given voluntarily, and under no circumstances are they ever promised, directly or indirectly, with the view of influencing advertisers. Many new advertisements have been sent to this work. The reader will find interest, and perhaps profit, in consulting them. The House of W. R. Warner & Co. is so well known to the public as to render any notice of it useless. It is justly entitled to the fullest commendation and to entire confidence.———The old Military Institute, at Lexington, Va., appeals to the public for a continuance of the support so long and so justly extended to it.———The Kentucky Military Institute offers its thorough course at rates which must command support.———The Medical Department of the University of New York has, in this number, a new advertisement which will be read with interest.———Physicians are striving to give medicines in a palatable and unobjectionable form; the granular effervescent preparations of Keasbey & Mattison meet the wants of the Profession, and they will doubtless receive a fair and full trial.———It will be observed in the advertisement of Dr. Jerome Kidder, that he has just been awarded a silver medal by the American Institute for his improved electro-medical apparatus. His apparatus is generally commended by many of the best physicians in this country.———The advertisement of H. Planten & Son should be consulted. Their empty jujube capsules are certainly a great convenience in practice. Medicines, nauseous and disagreeable, may be thus given with great acceptability.———Wood & Co., of New York, and Lindsay & Blakiston, of Philadelphia, publish lists of new medical works, which will interest the reader. ——— The inhaler of W. H. Smith & Co., of Buffalo, N. Y., is something new and well worthy of both notice and trial.———The advertisement of Dr. Justin Hayes, of Chicago, is from a physician of repute and excellent position in the city mentioned. His claims as a skilled specialist are admitted by many physicians of unquestioned ability.———The Baltimore Eye and Ear Institute is under the charge of Professor J. J. Chisolm, a member of one

of the best Faculties in this country. While many honorable and distinguished gentlemen regard such advertisements as injurious and unethical, many, equally competent, believe that it is proper and just for specialists to advertise in medical journals. This last opinion has been publicly endorsed and sustained by this Journal. This Institute is prosperous, and enjoys the confidence of the best physicians.———The use of uterine elevators is condemned by some and advocated by others. Those interested will see that Burrington's elevator is commended by most of the prominent physicians of Providence, R. I.———It will be seen that the old Transylvania Medical College is about to again open its doors The Faculty is nearly organized, and embraces several gentlemen of acknowledged ability as teachers and practitioners.———The advertisement of Codman & Shurtleff will be found interesting. This House is one of the best in this country, and it offers a complete assortment of articles of professional importance, and at prices unquestionably reasonable and satisfactory. To those wishing skeletons articulated or not, this House is fully commended. Their atomizers are now almost exclusively used in this country.———The new advertisement of W. T. Gordon, of Cincinnati, will attract deserved attention, and will be advantageously consulted by physicians of the Middle, Southern, and Western States.———Perhaps no House in this country commands more fully the confidence of physicians, druggists and pharmaceutists than the excellent House of Hance, Bros. & White, of Philadelphia. Their advertisement is familiar to all of the readers of this Journal, and those representing it fully deserve the confidence they so generally enjoy.———Parke, Davis & Co., of Detroit, have established an unquestioned reputation for the purity and pharmaceutical elegance of their preparations. The Eucalyptus Globulus which they have so expensively introduced to public notice will unquestionably command a growing interest in the mind of the general and professional public. The article respecting it, to appear from a wholly disinterested source, in the February issue, will be read with interest———In the next Supplement, attention will be called to other advertisements. It is proper to do this when such notices are made with the exercise of due caution and with accuracy; when they are prepared voluntarily and not secured by either solicitation or the tender of any equivalent.———The supporters of the Journal are assured that under no circumstances can an editorial notice in this Journal be purchased. Such offers, though accompanied with the tender of ample rewards, have always been refused; and always will be.

THE RICHMOND AND LOUISVILLE

MEDICAL JOURNAL.

VOL. XVII. FEBRUARY, 1874. No. 2.

ORIGINAL COMMUNICATIONS.

"Qui docet discit."

ART. I.—TREATMENT OF SYPHILITIC IRITIS—IS SALIVATION EVER DESIRABLE? By A. D. WILLIAMS, M. D., St. Louis, Mo., formerly Lecturer on Otology in the Miami Medical College, Cincinnati, Ohio.

The diagnosis having been settled, the best treatment becomes an important matter in syphilitic iritis, as in all other diseases.

The indications are briefly: 1st. To preserve the vision; 2d. To relieve the pain; and 3d. To *cure*, as far as possible, the disease of which the iritis is only a symptom—an evidence.

To preserve the vision, it is necessary to prevent the obstruction of the pupil by the exudation of lymph from the inflamed iris. This exudation endangers the sight seriously in all cases of iritis. It forms not only a false membrane through the pupil, but it causes adhesions to form between the iris and lens. If the false membrane and possibly adhesions have already formed, then the absorption of the membrane and the breaking up of the adhesions must be effected as far as possible. These

several most important indications are met, very fortunately, and I may say, happily, by the employment of a single remedy; the local use of the sulphate of atropine in solution (about four grains to an ounce of water). Everybody knows that atropine dilates the pupil. In doing that, it prevents adhesions, or breaks them up, as far as possible, after they have already formed, and also checks the exudative process. The absorption of the lymph is very little influenced by remedies; that must be left to the powers of nature.

But besides all this, atropine is a most powerful anodyne, and consequently it relieves very promptly the usually severe pain in iritis, and thus it fills another very important indication in its treatment. But again, atropine, in causing the pupil to dilate, produces a compression of the iris into a smaller space, and thus a quantity of blood is pressed (squeezed) out of the inflamed iris tissue. Consequently it exerts, in this physical way, an antiphlogistic influence upon the iris, as also by its anodyne property. But I barely mention here the several important actions of this great remedy in the treatment of iritis. I do not suppose that there is another single remedy in the whole range of materia medica that meets so many important indications as does atropine in the treatment of iritis, from whatever cause.

The solution is to be dropped into the eye from three to five times during the day; and, if the pain continues, two or three times during the night. It may be used, with safety, every half hour for a few times when the suffering is very severe. The only inconvenience its frequent use causes in grown persons, is an unpleasant dryness of the throat, a feeling of thirst that water does not satisfy.

In very severe and stubborn cases, four to six leeches applied to the corresponding sides of the nose, near the inner canthus, sometimes do very good service in checking the inflammation, though it is not often necessary to order them.

If the pain can not be controlled by the energetic use of atropine, and possibly leeches, then anodynes should be given

internally, or morphine be cautiously injected hypodermically. The patient, in the meantime, should avoid all violent exercise, and remain quiet in or about the house. A moderate amount of walking is not injurious.

Dieting is not advisable; in fact, it is better that he should eat enough to prevent hunger. All stimulants must be positively forbidden, except when the condition of the general health requires stimulation.

In addition to the above treatment, *hop poultices* may be applied over the eye in severe cases. Patients often speak of them as being very grateful to the feeling and decidedly soothing to the pain.

Such is a very brief statement of the necessary local treatment of not only syphilitic, but of all forms of iritis.

Passing from the local to the general treatment, I refer next to the necessary (essential) treatment. I have already intimated, and as every one very well knows, that the iritis is only a symptom—an evidence—of a prevailing constitutional disease, which, of course, must be treated in order to remove the direct cause of the inflammation of the iris. Very poor success would crown the efforts of any one who should rely solely upon the local treatment; both are equally important; the one to preserve or rescue the vision from danger; the other to *cure*, as far as possible, the original cause of the iritic inflammation.

The internal medication must be, in general terms, *anti-syphilitic*. Syphilitic iritis is one of the evidences of secondary syphilis; the system, therefore, is already contaminated (poisoned); consequently the great object is to eradicate the poison.

To be very brief; I rely mainly upon one combination, one prescription, for internal treatment. It is now pretty generally conceded that mercury, in some form, is necessary; but iodine, in some form, is, perhaps, equally as necessary. Iodide of potassium is a convenient form for the internal administration of iodine. I therefore combine the two. I prescribe bichloride of mercury (from the thirtieth to the fifteenth of a grain)

and iodide of potassium (five to ten grains) in solution in any aromatic waters, pure water, simple syrup, or syrup of sarsaparilla. This quantity is to be taken three times a day, and best after meals, on account of its nauseating effect. It does not nauseate a full stomach as much as an empty one. This prescription I continue right along till all traces of syphilis disappear from the body. The time required ranges from three weeks to three months. I rarely find it necessary to use anything else. Of course the physician must always consider the peculiarities of his patient. If one medicine is not tolerated, then another, similar in character, must be substituted. I select the bichloride of mercury, because that form, in the necessary quantity, rarely salivates. I have given it uninterruptedly for months, and have never yet salivated a single person. Iodide of potassium is selected because it is convenient. The other iodides would answer possibly just as well; some writers think they act even better.

The patient should eat as usual, but avoid all stimulants, if he is in good health otherwise. Some patients have to be treated in a general way in addition to the above. In all such cases, of course the physician is to be guided by general principles.

Such is a very brief statement of the necessary internal treatment in syphilitic iritis. The local treatment must be continued till the eye is entirely free from all redness. The internal treatment must be persevered in till the body is free from all syphilitic evidences. It is sometimes difficult to get a patient to continue treatment, particularly the internal, sufficiently long. The physician must see to that always.

Is Salivation ever Desirable in Syphilitic Iritis?—To express my views on this question is the chief object I have in view in writing this communication.

Some months since Dr. Ricord, of Paris, made a speech before the British Medical Association, at Birmingham, on the treatment of syphilis. On account of the *high* authority of its author, that speech has gone the rounds of the medical press

everywhere, as embodying his most recent notions of our present knowledge of syphilis and its treatment. Ricord has ceased to teach and write on this subject, which fact makes his last utterances so much the more interesting. In the course of that speech Dr. Gross asked: "Does Dr. Ricord believe in salivation in syphilis?" To which Ricord replied: "No; certainly not. Salivation is an accident following the treatment, and is to be avoided as much as possible. There is but one case in which I approve of salivation, and that is in disease of the eye—iritis. When that occurs, and salivation is brought on, the inflammation of the iris subsides."

I confess, to some degree of surprise, when I first read this statement from such high authority, and I must express my disbelief (in a modest way) in even the *desirableness*, much less *necessity*, of salivation in the treatment of specific iritis. Why salivate a man because he has iritis? Salivation is no *cure* for iritis. Let no one think, as Ricord implies, that ptyalism is a certain cure for specific inflammation of the iris. Nothing is farther from the truth. I have never salivated a single individual, and always take extra pains to avoid it. I have seen persons sharply salivated in the hands of others, and instead of being a *benefit*, the mercurialism seemed to be a *hindrance* to the progress of the cure. I always use mercury, as above stated, but never to the extent of ptyalism. The moment the slightest symptom of this occurs, the mercury should be at once stopped. There is nothing more satisfactory as to general results and easier to treat than specific iritis. Only occasionally a stubborn case is met with.

Observation teaches that specific iritis does not continue indefinitely. It runs its course in comparatively a short time, and then subsides of itself; that is, the acute inflammation subsides, but its effects, the results of that inflammation, continue permanently in the form of adhesions and false membranes in the pupils. To prevent such unfortunate and incurable consequences should be the first care of the physician. Lymph, the product of the acute iritis, forms the adhesions and false mem-

branes. This lymph in the early or fresh stages being soluble, is absorbable, but as soon as it hardens (partly organizes) it becomes insoluble, and consequently non-absorbable.

Mercury, even to the extent of salivation, will not prevent the exudation of lymph from the surface of the iris; neither will it prevent the formation of adhesions and false membranes; nor cause them to be absorbed after they are formed. It will neither prevent nor cure the bad consequences of iritis, so far as the vision is concerned. Why then should Ricord say he is always *glad* to see salivation occur in all his patients who suffer from specific iritic inflammation? I am sure it would not rejoice me a bit to see it occur in one of my patients. I never want the credit of producing profuse ptyalism in any one.

Altogether, I must conclude that salivation is *never* desirable in the treatment of syphilitic iritis.

ART. II. — SUCCESSFUL OPERATION FOR THE FORMATION OF ARTIFICIAL FALSE JOINT, IN CASE OF BONY ANCHYLOSIS OF THE LEFT TEMPORO-MAXILLARY ARTICULATION, AFTER ESMARCH'S METHOD. By S. EAGAN, M. D., Jefferson, Texas.

Accompanied by his father, Frank Herring, of Arkansas, a lad of fifteen, dwarfed in stature, much reduced in flesh, and presenting altogether a very delicate and effeminate appearance for a boy of his age, applied for treatment early in January, 1873, the subject of anchylosis of the left temporo-maxillary articulation, the result of inflammation, terminating in gangrene of the soft parts and necrosis of the bones of the left side of the face, with copious plastic effusion into and about the joint, produced by the abuse of mercury in the treatment of some acute malady during the third year of life. On addressing some interrogatories to the boy, we were informed by the father that his son had not been able to articulate intelligently to one unfamiliar with his peculiar utterances since the occur-

rence of this accident, and, on examination, we found the jaws so immovably fixed against each other, with the front teeth so completely interlocked as to effectually prevent the protrusion of the tip of the tongue at any point. By reason of the elasticity of the inferior maxilla, we were enabled by the application of considerable force to depress the bone on the right side sufficiently to demonstrate the mobility of the corresponding temporo-maxillary joint. All of the deciduous teeth of the right side, above and below, and embracing those of the left side as far back as the first molar, had been shed, and their places supplied by the permanent; near the centre of the cheek on the diseased side presented prominently to view a fistulous opening into the mouth, large enough to admit the index finger, partially occluded by a black mass of necrosed bone, and from which constantly issued offensive saliva, adding no little to the disgusting deformity of this unfortunate. From this opening a considerable mass of inodular cicatricial tissue, involving the thickness of the cheek, extended downwards and backwards in the direction of the angle of the lower jaw.

An incision carried from the angle of the left inferior maxilla along the base of the bone forwards to a point near the symphysis, intersected by a second extending from the fistula, marked the outline of flaps, which, dissected up, fairly exposed the diseased structures within. The alveolar processes of both the superior and inferior bones throughout the molar region were found in a state of complete necrosis, holding imbedded in their alveolar grooves both the deciduous and permanent teeth belonging to them in a state of general decay, the permanent ones existing in a very rudimentary state of development. The dead bone and teeth having been removed by forceps and cutting plyers, we proceeded to resect the lower jaw-bone immediately in front of its angle, removing, by means of the chain-saw, a section nearly an inch at its base by three-fourths at its smaller extremity, after Esmarch's method of excision for the formation of artificial false joints. This having been accomplished, we were gratified to find the jaws completely unlocked

and the mobility of the inferior maxilla quite restored. After "vivifying" the margins of the fistula into which the vertical incision extended, the lines of incision, including the fistula, were brought together by the silver suture supplemented by adhesive strips, and a light water-dressing applied, an opiate administered, and the patient put to bed. Moderate constitutional excitement followed. The greater extent of the wound healed by immediate union, a portion of its extent, opposite the point of resection, healing at a later period, and after the discharge of considerable pus by granulation. The healing of the fistula also was delayed for several weeks, it being accomplished finally by secondary adhesion of opposing granulating surfaces.

Passive motion of the lower jaw was commenced after a day or so, and continued for some two weeks, at which period the masticatory function had been so fully recovered as to enable the patient to dispose of the ordinary dietary without pain or inconvenience. Very rapid improvement followed, both general and local, and when he left for his home, five weeks from date of operation, we felt assured of a successful issue of the case.

Six months later, patient called upon us, in Jefferson, so much improved in every respect that we scarcely recognized him. He had grown and developed very much during this short period, and the features of the face had undergone very notable improvement. His enunciation had become quite distinct and intelligible, and the function of the lower jaw was being performed in a very satisfactory manner. No disposition to contraction in the soft parts or to reädhesion of the ends of the resected bones apparent. A report from this lad's father in November states that the condition of his son is, in every respect, satisfactory.

We are indebted to Drs. Wootten, Wallace, and Layne, of this city, for valuable assistance in the operation and after-treatment of the case.

ART. III. — INFLAMMATION—ITS MECHANISM, STAGES AND RESULTS, WITH AN OUTLINE OF THE TREATMENT APPLICABLE. By F. PASCHAL, M. D., San Antonio, Texas.*

Perhaps no subject has so engaged the professional mind, from the earliest ages of medicine to the present day, as that of inflammation. Indeed, when it is considered the "key-stone" to the arch of medical and surgical science, and the "pivot" upon which the medical philosophy of present and past periods revolves, it is not surprising that volumes should have been written on this subject, and more especially since microscopic investigations have lent their aid to the establishment of truths which the unassisted eye could neither unravel nor appreciate.

When a clear mental picture of the phenomena of inflammation has once been obtained, it serves as a guide to the proper treatment of nearly two-thirds of the diseases met with at the present day. It is therefore important that this subject should be well understood.

The definition of the word inflammation has caused more trouble than any word in medical science. It seems to have been defined to represent a morbid condition, in which the parts appear to burn, or to be inflamed, etc. Hence it is that the old classical definition was given to it as being "that condition of a part in which there are heat, pain, redness, and swelling." These symptoms were supposed to represent inflammation, but they are not always manifested; and when manifested, there is not necessarily inflammation.

For example, in senile pneumonia, cases are not wanting to show that death has occurred in the third stage of the disease, where, save the physical signs, nothing led one to suspect an existing inflammation, but where post-mortem examinations showed plainly in these cases that inflammation was the cause of death. From first to last, in many of these cases, there is not one of those symptoms that absolutely demonstrates an existing inflammation. Instead of there being heat, the temperature has

* The Prize Thesis of the Louisville Medical College for the Session of 1872-3. Recommended for Publication.—ED.

been often diminished, and there has been no pain. Again, abscesses of the brain and other vital organs have been discovered only by the results of post-mortem examinations, so entirely absent were the once claimed symptoms of inflammation.

It has thus been seen, that inflammation may exist without any of the so-called symptoms once universally accepted as the logical evidences of this condition. All of these symptoms may be present without there being any existing inflammation.

Redness is one of the first symptoms said to be present, but how often do we see this physiologically demonstrated. If a cheek be suffused with a blush, or red with anger, or warm from exposure to heat, no one would say that it was inflamed. Heat may be produced by friction, or by a burn, yet this would not constitute inflammation. Pain of the severest kind may be produced by pressure on a nerve, but this would not be inflammation. Cellular infiltration, caused by anæmia, or by mechanical obstruction in the veins, may produce swelling, yet this is by no means an inflammation. Irritation may excite most of these symptoms without producing inflammation. A "corn," for example, may induce all of these symptoms, yet it would be absurd to call such a condition inflammation. We see, then, that the word is based upon a fallacy, and that it is impossible to give to it a correct definition. It is easy to understand why this definition was given to it; the reason being that, in olden times, writers described chiefly what they saw, and always seeing the symptoms mentioned, regarded these evidences as the conclusive manifestations of inflammation. Several other definitions have been offered, but they are equally untenable.

Perverted nutrition has been adopted by many as a definition of inflammation, but there is often suspension or perversion of nutrition without inflammation; and in ulcerative inflammation there is inflammation existing, while not only is there no perversion of nutrition, but there is no nutrition whatever existing; there is exactly the opposite, a positive loss of structure.

The word has been so engrafted into the science of medicine,

however, that though no definition can be given to it, it is yet impossible to abandon it; the processes constituting inflammation must then be studied, while the definition of the word, like the definition of many words, must remain impracticable or impossible.

In studying almost any subject in medicine, we approach it through the pathway of the nervous system; that system which exalts man above the lower animals and distinguishes him from the inanimate beings of earth. As is well known, primarily this system is divided into two grand divisions, the cerebro-spinal and the sympathetic. These two systems, it was formerly taught (and indeed is taught by many physiologists and anatomists of the present day), are separate and distinct, communicating only through ganglia. It would not be necessary here to notice this teaching did it not concern us in the subject of inflammation. Late investigations have proved that not only do these two systems communicate through ganglia, as is well known, but that they communicate filamentally; or, in other words, that there is a direct communication between these two systems by fibres; these fibres interlacing more thoroughly indeed than do capillary blood vessels inosculate. Wherever a cerebro-spinal nerve crosses a sympathetic nerve, there is an interchange of fibres, so that were one to cut a so-called sympathetic nerve, it has been demonstrated by many celebrated experimenters that there would be destroyed at least four-fifths of cerebro-spinal fibres, and only one-fifth sympathetic nerve fibres.* This large proportion is specially shown in large nerves; as the splanchnic, for instance.

To sum up, then, it may be said that sympathetic nerves, when coming in contact with cerebro-spinal nerves, interchange fibres, and are then often composed of from two to four-fifths

* The views advocated in this connection are given by Professor Gaillard from the recent teachings and experiments of Tholozan, Bernard, Lovan, Brown-Séquard, Nothnagel, and Pfluger. It is always better, where discoveries are so recent as these, to give the authorities.—P.

cerebro-spinal nerve fibres, and that there then exists a direct communication between them by filaments.

Bearing this in mind, and remembering the intimate relation existing between the vascular and nervous systems, the "vaso-motor" nerves acting as sentinels to the arteries; remembering also that an irritation of any kind propagated to a part is conveyed to the spinal cord by the cerebro-spinal nerve fibres and reflected back upon the sympathetic fibres, and there is unveiled the obscurity of "counter-irritation," and we see plainly the "conceivable rout" for the reflected impressions to reach with their influence the innermost recesses of organs. But more than this, it must be remembered that the same causes will produce contraction of the vessels by this same reflex action. The physician then no longer applies cold to the external surface of the chest for the arrest of hæmorrhage from the lungs empirically, but he knows that there is a direct communication between the nerves supplying the integument and the nerves guarding the vessels supplying the lungs, and that by irritating the cutaneous nerves the impression is also made upon the vaso-motor nerves of the arterial vessels, causing them to contract and thus arrest hæmorrhage.

The vascular system requires a little notice in connection with this subject. The arteries and veins are composed of three coats. The one most interesting in this connection is the muscular coat. This is found in the larger arteries and veins, and when the arteries become smaller, they assume the name of arterioles; instead of muscular fibres being found in these, there exist only the muscle cells, these being substituted for this coat; it being a beautiful provision of nature for the economy of power and space. The capillaries are composed of a simple homogeneous membrane, having in themselves no power of contracting, but being under the control of the arterioles. The arterioles may be said to be tributaries of the capillaries, and each network of capillaries is under the control of a single arteriole. Hence the phenomenon of pallor is accounted for by the contraction of the arterioles; these shutting off the supply of blood

from the capillaries which furnish the part with blood. Until lately it was denied that there were openings or "lacunæ" in the walls of the blood vessels, but better microscopic investigations have shown that these vessels are thickly studded with "lacunæ" or "stomata," as they are called.

Much credit is due to Assistant Surgeon J. J. Woodward, U. S. A., of Washington, D. C., for very beautiful microscopic illustrations contributed by him to medical science; some of these sent by Dr. Barnes, Surgeon-General U. S. A., to Prof. Gaillard demonstrate the stomata beautifully. The demonstrable existence of these stomata constitute a most interesting link in the chain of evidence proving the mechanism of inflammation, as is now so generally accepted.

While irritation is essential for the production of inflammation, it does not, as we have already seen, constitute inflammation. The first effect of any irritant applied to a part is the immediate transmission of the impression to the "vaso-motor" nerves guarding the vessels (the arteries and arterioles) supplying the part. The irritation thus transmitted causes the muscular coat of the vessels of the part to contract; with this contraction of the vessels there occurs an increased velocity of the blood and a diminished volume of the blood stream. The cause of this increased velocity of the blood stream may be explained by a simple law of hydraulics; where a certain quantity of fluid is driven forward in a given time with a certain force through an open tube, the velocity produced is relatively increased, if the force and time continuing the same, the diameter of the vessel be diminished.

This increased flow of blood to an irritated part, it is contended by many, produces increased nutrition. But it must be borne in mind, that the three essential conditions for proper nutrition are: First, a proper condition of the part to be nourished; second, a proper supply of healthy blood; and third, an unimpaired nervous influence. In the commencement even of the inflammatory process, nearly all of these essentials are subverted. The tissues are in an irritated state, and

therefore not in a proper condition to receive the necessary elements from the blood for the proper nutrition of the part. There is a greater supply of blood to the part than is required, and a failure of the proper interchanges of gaseous elements in the capillaries necessary for health and nutrition. The blood supplied is, therefore, not true physiological blood. Lastly, the nerves of the part being in a state of excitement, nutrition of the part would necessarily be impaired.

The stage of contraction of the blood vessels is of exceedingly short duration; so short, indeed, that some deny that it exists. The next change taking place in the arterial blood vessels of the part irritated, is a return to their natural size. This condition does not last long, however, for the muscular coat of the vessel becomes functionally exhausted, the force of the heart and arteries distends the vessels of the affected part, and these manifest that condition of extreme dilatation known as the state of ovoid expansion. As the result of this vascular dilatation, the blood stream becomes markedly slower, for the blood entering this expanded vessel escapes to a material extent the driving forces of the circulation. This condition is beautifully illustrated by a stream of water as it enters suddenly an expanded portion of the channel, the stream becomes slower, and an eddy is at once formed. The same thing occurs in the blood vessel, the only difference being that in the stream of water the word "eddy" is given to this circular motion of the water, whereas in the blood this motion is termed "oscillation." The corpuscles moving slowly and adhering closely to each other, and closely to the walls of the vessels, there soon results the condition known as "stasis," or arrest of the movement of the blood current. This condition marks the end of the first stage of inflammation, or the stage of congestion, or the physiological stage, as it is sometimes called. Up to this time, no morbid changes have occurred in the parts, and should the process go no further, the parts may return to their natural condition; and "resolution" would thus take place.

In this expanded condition of the vessels, one of three results

is usually manifested: Paralysis of the heart, from inability to overcome the obstruction; rupture of the vessels, producing hæmorrhage; or, (what most frequently occurs) effusion of the serous elements of the blood into the surrounding tissues. When this latter takes place, it marks the occurrence of the second stage of inflammation, or the first pathological stage, or the stage of effusion. This is called the second stage of inflammation, because it marks the second grand link in the chain of phenomena.

It is here proper to observe, that in this stage of inflammation there may be either serous effusion or lymph effusion manifested. The origin of the corpuscles in lymph effusion has engaged much attention; some claiming that they are identical with the white corpuscles, while others claim that they are the results of proliferation of preëxisting cells. Modern researches seem to indicate that the lymph corpuscle is usually identical with the white blood corpuscle. The great interest in regard to lymph so effused is that it often undergoes organization; producing elements, "neoplasms," in some instances, and being a material agent in other instances in effecting reparation of structure. The character of the tissue, as before remarked, determines to a great degree the character of the inflammatory product. Thus, in the fibro-serous membranes the inflammatory process seldom passes the second stage, and, as is often the case, the effused product becomes organized, producing enlargements, indurations, etc., and often inducing serious complications; as in cirrhosis of the liver and kidney. Again, in mucous membranes, instead of there being neoplastic results, there is a great tendency to early suppuration. Why these structures should give the different results just mentioned, is not demonstrable; to speculate upon the reasons would be to enter the domain of theory.

Mucus is held by some to be exuded in inflammation, but little is known about this; and as it is not one of the elements of the blood, it is hardly probable that it can be poured out from the blood. It is true, it may be found in abnormal quantities

in inflammation of some mucus surfaces, but this increase is probably due to hypersecretion.

To return to the mechanism of inflammation in the second stage; after the effusion of the serum, the fibrin, and the salts of the blood pass from the blood vessels into the surrounding structures. The next and most interesting phenomenon in the inflammatory process, is the escape of the white blood corpuscles through the walls of the vessels. The escape of the "leucocytes" from the blood takes place in virtue of the following conditions now existing: First, the distention of the vessels of the part producing an enlargement of the stomata or openings in these vessels; in the next, the "amœboid" movement possessed by these "leucocytes." The escape of these white corpuscles marks the termination of the second stage of inflammation; or, as it is sometimes called, the stage of effusion or first pathological stage. The next important change is that by which the effused substance undergoes transformation and is converted, by some unexplained means, (which, very vaguely indeed, is called "catalysis,") into pus; with the formation of this substance, the inflammatory process ends, marking the third or suppurative stage of inflammation.

Pus is a creamy, whitish-yellow substance, sometimes having a greenish tinge, thick, opaque, smooth, slightly glutinous to the touch, with a faint odor, and a slightly sweetish taste. Chemically, pus is composed of water, albumen, pyine (which appears to be almost identical with fibrin), fatty matter and salts; this, of course, applies to healthy or laudable pus. Under the microscope, pus is found to consist of corpuscles floating in a homogeneous liquid. The discovery of the origin of the pus corpuscle forms one of the grandest contributions that has been added to the medical science of the present day, and entirely revolutionizes the old teaching of the origin of pus. It is impracticable to notice the different theories advanced at the present day as to the origin of the pus corpuscle, but it will only be necessary to notice the two which most command attention. In 1842, Dr. W. Addison claimed that the white corpus-

cles passed through the walls of the blood vessels. In 1846, Dr. Augustus Waller described more fully the same phenomenon. Both these observers concluded that the escaped blood corpuscles became pus corpuscles. Their observations were soon forgotten, and shortly afterward Virchow's opinions (of pus corpuscles being formed from the connective tissue corpuscles by simple division or by endogenous growth) followed. His views swayed the professional mind until 1867, when Cohnheim discovered the leucocytes passing through the stomata in the blood vessels. "These changes were observed in the mesentery of the frog poisoned by Woorara. Sufficient inflammation was excited by merely exposing the membrane to the air, which produced first hyperæmia, and after a lapse of twenty-four hours the exudation of a thin, dull, gray, gummy layer or or fibrinous pseudo-membrane." In following these changes under the microscope, the vessels were seen to dilate, and, under the very eyes of the investigator, these white blood corpuscles were seen to "emigrate" from the blood vessels. From other experiments, he concludes that pus corpuscles "proceed altogether from the white corpuscles of the blood which, by a process of 'emigration' through the lacunæ in the vascular walls, leave the vessels and accumulate around them, and in the space of the neighboring tissue." No evidence has yet been obtained to prove that the white corpuscles which have thus escaped from the blood current, can "by fusion or endogenous multiplication generate new ones." Cohnheim further observes, that no evidence exists of the formation of pus cells where there are no vessels, and finally, that genuine suppuration never takes place in cartilage, which is the only kind of connective tissue that is destitute of spaces or lacunæ through which corpuscles can make their escape. These experiments have been confirmed by many excellent microscopists, both abroad and in in this country. Assistant Surgeon J. J. Woodward, U. S. A., has contributed many valuable and beautiful microscopic illustrations, showing the white blood corpuscles in the very act of emigrating through the walls of the blood vessels.

But besides these beautiful and positive facts, others equally as positive and beautiful verify Cohnheim's statement of the pus corpuscle being identical with the white blood corpuscle, and subvert the statement of pus cells being formed from connective tissue corpuscles. Animals have been fed on madder and suppurative inflammation induced, and while the connective tissue corpuscles have been found stained with the madder, the pus corpuscles were not stained at all.* It is reasonable to suppose, therefore, that were the pus corpuscles produced by proliferation of the connective tissue corpuscles, if they were the offspring of the connective tissue corpuscles, that they would also be stained by the madder used; but they are not in any respect colored. The conclusion, then, is that they are not produced by proliferation of the connective tissue corpuscles; but the pus corpuscle is nothing more than an "emigrated leucocyte." After pus has formed, there are but two ways by which it can be removed from the system. The first is by "pointing," a natural or artificial opening being made; the second is by the pus cells passing through their natural life and rupturing. The pus that has now undergone this change, is known as "pathological milk." In the blood, this exudation undergoes further chemical metamorphoses, whereby, according to Liebig, "it is converted by means of oxygen into urate of ammonia, choleic acid, sulphur, phosphorus, and phosphate of lime. The urate of ammonia, by the further action of oxygen, is converted into urea, and carbonic acid, and carbonate of ammonia; the sulphur and phosphorus into sulphuric and phosphoric acids, which, by combining with alkalies, form sulphates and phosphates." In consequence of these and similar changes, the exudation is finally removed from the economy by the kidneys and other emunctories. The débris or shells of the pus corpuscles are left behind, producing what is known as "the caseous pro-

* The writer can not refrain from acknowledging his gratitude to his friend and preceptor, Prof. E. S. Gaillard, for his teachings in regard to inflammation. Had it not been for him, the writer would have been unable to have presented these many new, beautiful and valuable facts.—P.

duct," which is very interesting, as this is thought by Niemeyer and others to be a cause of the "consumption" occurring after a pneumonia which has passed into its third stage; many such cases have been erroneously regarded as cases of pulmonary tuberculosis.

Inflammation may be said to terminate by "resolution"; suppuration; ulceration, and mortification. The return of the inflamed parts to their normal condition has already been noticed in treating of the different stages through which it passes. "Mortification may be said to be the death of a part, while the rest of the body remains living." The causes of mortification are numerous; aside from those produced by mechanical injuries and chemical agencies, without the intervention of inflammation, may be noticed the mortification occurring as a result of inflammation. The life of a part, while it is said to be separate and distinct, is so dependent upon other influences exerted over it, that were these influences withdrawn, it would no longer live, but perish for the want of help. This we see beautifully illustrated in mortification; here the elements for the proper maintenance of the parts are withdrawn. The blood, which is the life thereof, no longer reaches the inflamed parts, or if it does, it no longer exerts the influence it once did; or the nervous influence over the part may be destroyed; or the tissue itself may not be in a proper condition to receive the elements essential for proper nutrition. Mortification, then, may, in a few words, be said to result from the absence of nutrition of the part. When obstruction of the blood has been the cause, the parts die of "dry gangrene," as it is called. Then as the cuticle breaks and is removed, the subjacent integuments heretofore kept moist are exposed to the air, gradually becoming drier, withering, mummifying, and of a dark brown or black color, having a mouldy rather than a putrid smell. In the moist variety of gangrene "a very large amount of blood plasma is thrown out, a great many capillaries are also ruptured, and blood corpuscles, more or less mixed with the liquor-sanguinis, are exuded." The exudation thus formed compresses

the parts into which it is thrown and paralyzes the nerves, obstructs the blood vessels, and arrests the circulation. In this condition the parts are cast away, degenerate and liquefied. The process of ulceration differs from mortification only in the manner in which the parts are thrown off. In ulceration the parts are thrown off in invisible particles, while in gangrene the parts are cast off in larger pieces. Various degenerations may result from inflammation.

The causes of inflammation may be comprised under three heads—viz., Mechanical, Chemical and Vital. The mechanical causes of inflammation may include all of those influences which, by direct violence, tend to disturb the proper equilibrium of the parts; heavy blows, gun-shot wounds, bruising and tearing of the tissues, etc. The chemical causes may be dispensed with in a few words; heat, cold, electricity, acids, alkalies. The vital causes of inflammation are veiled in great obscurity. Why certain alkalies should predispose to inflammation, or why the poison of small-pox should crop out at certain points of the surface, at least by what influence those results are determined, is beyond our knowledge. "Cold" is said to be one of the chief vital causes of inflammation, and yet when we ask ourselves what is "cold," ignorance is the echo, unless one endeavors to explain them through the complex agencies of ozone. But whether the causes of inflammation are mechanical, chemical, or vital, the phenomena are the same.

The general symptoms of inflammation are of great importance, not only as indicating the nature of the disease, as when the inflammation exists in an organ hidden in the deep recesses of the body, but it is also important as a guide to the proper treatment. Besides the local symptoms of pain, heat, redness, and swelling, when they exist, there is added to these the symptoms of inflammatory fever; the premonitory chill is usually very decided, but not always of long duration; this is followed by a stage of reäction; fever then lights up; the pulse is quick and full; there are lumbar and arthritic pains, headache, restlessness, much discomfort; diminished desire for mental or phys-

ical exertion; the head is generally hot; the face flushed; the eyes suffused; the tongue may be loaded, white and moist, or it may be red and dry. The secretions and excretions in general are materially diminished; the mouth is dry and parched; the urine high-colored and scanty; the respiration frequent; the breath hot; digestion and assimilation are interfered with, and as the fever advances so does the emaciation increase and strength diminish, until death or convalescence terminates the scene.

No uniform relation can be said to exist between the constitutional symptoms of inflammation and the size or importance of the parts inflamed; for where from severity of constitutional symptoms one would be led to believe that there existed an inflammation of a grave and important character, results often show the contrary; conversely where from mildness of symptoms an unimportant inflammation is expected, the reverse is often the case.

The event of suppuration is generally marked by a chill or rigor; the fever which heretofore was probably of a sthenic type, now begins to assume the asthenic form; the local pain is generally diminished; the pulse is frequent and weak; the skin relaxed and moist; and should the constitution fail to supply the material to resist this continued sapping of the system, death from hectic closes the scene.

The sweating is sometimes colliquative, and may be attended with colliquative diarrhœa. The mind unclouded before, often wanders now, and the functions of life gradually terminate. While many more symptoms of hectic could be given, the beautiful portrayal of the death of Smike from consumption, by Charles Dickens, which we will quote, is of itself almost a complete description: "But there were times and often too, when the sunken eye was too bright; the hollow cheek too flushed; the breath too thick and heavy in its course; the frame too feeble and exhausted to escape regard and notice. There is a dread disease which so prepares its victim, as it were, for death; which so refines it of its grosser aspect, and

throws around familiar looks unearthly indications of the coming change; a dread disease in which the struggle between soul and body is so gradual, quiet and solemn, and the results so sure, that day by day, and grain by grain, the mortal parts waste and wither away; so that the spirit grows light and sanguine with its lightening load; and feeling immortality at hand, deems it but a new term of mortal life; a disease in which death and life are so strangely blended, that death takes the glow and hue of life, and life the quaint and grisly form of death."

The treatment of inflammation, aside from its great importance, forms one of the most interesting features in the history of medicine. When we look back upon past times, when the fathers of medicine thought inflammation an entity, a something added to a part, and deemed a person suffering from inflammation possessed with a demon, and met it with means to rid the system of this demon; or to more recent years, when empiricism held sway over the scientific mind, and this disease (as it was called) was met with purgatives in one hand and a lancet in the other, and then contrast these methods of treatment with those adopted at the present day, it forms a beautiful picture of the splendid progress of medical science.

Whatever be the plan of treatment adopted in inflammation, it should have for its object the restoration of the parts to their normal condition. The treatment must correspond to the three stages into which inflammation is divided. It will be necessary to bear in mind the condition of the blood vessels and the blood stream during the first stage of inflammation; and it will be remembered that the vessels are distended in this stage, and that the blood is moving sluggishly in them. The indications for treatment of the first stage are to restore the vessels to their proper condition, and to try and enliven the sluggish stream. To effect this, five or more different plans of treatment may be adopted; each one having in view the accomplishment of the same end; namely, the restoration of the blood vessel and the blood stream to their natural condition. The different methods of treatment are as follows: The appli-

cation of cold; blood-letting, or the spoliative treatment; the derivative treatment; hæmostatic; the use of medicinal agents producing direct contraction of the muscular elements of the blood vessels; as ergot, belladonna, etc. The spoliative treatment (blood-letting) has for its object the diminution of the heart's action, and to send a diminished quantity of blood to the inflamed parts, thereby allowing, if possible, the vessels to regain their natural size.

This plan of treatment is not resorted to as much now as in former times, when it was supposed that there was an increased amount of fibrin in inflammatory blood; and that the "cup-shaped" appearance of the clot and the "buffy coat" were manifestations of this condition of the blood. It is a sad fact that the "cup-shaped" and "buffy-coat" appearance of the blood, as the so-called characteristic of inflammatory blood, should be handed down from the time of Hippocrates to the present day, and accepted as a fact by almost every one who has written on this subject, when not one particle of truth exists of any relation between the two. While we are unable to account for the cause of the coägulation of blood, some, with Robin, supposing it due to a substance called fibrin, (?) still we are not at a loss to understand why, under certain circumstances, the blood assumes this peculiar "cup-shaped" and "buffy-coat" appearance claimed for it in inflammation. For example, a person may be bled so as to give, or so as not to give, the "cup-shaped" and "buffy-coat" appearance to the blood. Let a person be bled from a large blood vessel by making a large orifice, and let the blood be received into a deep, narrow vessel (as a quart cup), and what will be the result; the corpuscles of the blood will have time to gravitate to the bottom of the vessel before the blood coägulates, and the serum of the blood will rise to the top, giving it the "buffy coat," and the vacuüm produced by the coägulation of the blood will give it the "cup-shaped" appearance. Reverse these conditions, and what will be the result? Take the same person and bleed him from a small orifice, and let the blood be received into a shallow vessel, and

the result will be that the blood will coägulate immediately, and the corpuscles will not have time to gravitate, but will be found intimately intermixed with the serum and fibrin of the blood, so that it will be impossible to have the "buffy-coat" appearance given to the blood. There are animals whose blood always gives the "buffy-coat" and "cup-shaped" appearance when bled. The horse, for example, can not be bled so as not to give the blood this peculiar appearance.

Fibrin is said to be increased in inflammation, but this is not always the case; for, in small-pox, where the entire body is one mass of inflammatory sores, the amount of fibrin is diminished to 1.10 part in a thousand, the normal proportion being two and a half in a thousand.

Again, there are diseases producing extensive asthenia, in which the proportion is largely increased, as in carcinoma; the proportion here is increased to sixteen parts in a thousand; so that the law of bleeding, where there is an increase of fibrin, is not tenable; it is foolish. But aside from what has already been said, it is a well-known fact, that the more a person is bled, the more is the relative proportion of fibrin in the blood increased. Therefore, while a person is being purged and bled on the supposition that the fibrin is being diminished, it is, in fact, being increased.

The derivative plan of treatment may include all those means by which the blood is derived from the inflamed parts. Under this head may be included heat, purgatives, diuretics, diaphoretics, counter-irritants. Hæmostatics act beneficially in controlling the heart's action by diminishing the amount of blood to the part. The chief of these is veratrum viride. The specific plan of treatment, as it is called, causes direct contraction of the blood vessels and restoration of the proper circulation in the parts. Belladonna and ergot, and their alkaloids, seem to exert this influence.

The treatment for the second stage of inflammation may be by absorbents and stimulants when these are indicated.

The treatment for the third stage of inflammation is the sup-

portive and stimulant from the beginning. Of course, other indications in inflammation may require treatment, but it may be laid down as a rule, that each special inflammation requires but a modification of the general plan of treatment. This thesis, however, having been intended to demonstrate the mechanism of the inflammatory process rather than its treatment, it is only possible to give these few principles in regard to treatment.

ART. IV.—AMPUTATION OF THE THIGH BY PROF. ESMARCH'S BLOODLESS OPERATION. By PAUL F. EVE, M. D., Nashville, Tenn.

December 17th, was called to an adjoining county to see a lady, twenty-four years of age, and the mother of one child. A few weeks before this time, Mrs. K. noticed, from slight pain or uneasiness, an enlargement of the tubercle of the right tibia. No cause could be assigned for it. In consultation, it was decided to lay open the swelling, now about the size of a common egg, but the incision gave no relief. It was soon after this that I was sent for.

The affection was very obscure. The patient recollected having once slightly struck its location, but does not believe this was its source; she had, however, apprehended its gravity, and of her own accord, said that the limb would have to be amputated. The tumor now involved the inner tuberosity of the tibia, as well as its tubercle. To add to the embarrassment of the case, pregnancy was suspected, and was, unfortunately, confirmed by an examination.

The first day of January (this month), I was called again to see this lady, and met Drs. Ransom, Wendel, Turner, and Byrn, Found the disease had rapidly advanced during the past two weeks, and was now the size of a goose egg. Amputation was unanimously decided upon, in consultation, at the knee-joint or above it, according to appearances which would be revealed

by the operation; for now the affection was believed to be at least semi-malignant. Pregnancy had advanced to quickening.

It was decided to try Dr. Esmarch's method for bloodless operations on the extremities, as it was all-important to prevent the loss of much blood in the case. The right limb was elevated for a few minutes, ether having been inhaled; an India-rubber bandage, made of the third thickness of dentists' rubber dam, was then tightly applied over the foot, leg, and half way up the thigh, a soft compress having been previously placed in the popliteal space; then the India-rubber tubing was secured tightly just above the bandage, which latter being now removed, all present noticed how pale the leg appeared. No pulsation could be felt in any of its arteries, and the amputation, first attempted at the knee-joint, was completed above the condyles of the femur, because the anterior flap, below the patella, was found to be involved in the disease. No blood escaped in cutting the skin or soft parts, nor in fact until after the popliteal artery was tied, and the rubber tubing, acting as a tourniquet, was removed. We noticed how quickly reäction took place, and how soon was the recovery from the effects of the operation; the lips indeed becoming red in a few minutes after she was removed to bed from the operating table.

Six days after the amputation, the family physician wrote to me: "The stump was dressed on the fifth day—though suffering a good deal from nervous disturbance, our patient has gotten along so far safely; no abortion; stump looks well; hope her general health will now improve."

The tumor occupied the upper anterior surface of the right tibia, and has been carefully dissected. Was opened by a crucial incision down to the bone through a pultaceous mass two inches thick. The periosteum was found denuded from the three facets of the tibia, leaving it rough and ulcerated. Even the medulla was in this portion involved. Five inches below the knee-joint the osseous structure, as well as the soft parts, was sound.

As a very favorable opinion has been entertained and expressed of this new method of performing operations on the extremities, it is now no small gratification to report a case so soon and fully confirming all promised by it.

ECLECTIC DEPARTMENT.

"Carpere et colligere."

ART. I.—THE SURGICAL TREATMENT OF ANEURISM. By PROFESSOR HOLMES, Royal College of Surgeons, of England.

In his lecture on "The Surgical Treatment of Aneurism in its Various Forms," Professor Holmes said that the conclusions justified by present experience as to the applicability of Brasdor's operation in innominate aneurism appeared to him to be as folllows:

1. That the distal ligature of the carotid alone, or in conjunction with that of the third part of the subclavian, can not be trusted to produce the complete consolidation of the tumor.

2. That the natural effect of the ligature of the carotid artery is to produce coägulation in that part of the sac directly connected with the mouth of the artery.

3. That this may suffice practically for the cure of the aneurism when the subclavian part of the aneurism is small and shows no disposition to grow.

4. That in other cases where the mouth of the subclavian artery is previously obliterated by impacted clot, the ligature of the carotid only may effect a radical cure.

5. That for these reasons it is better, in any case which appears to require distal ligature, to commence with the operation on the carotid alone, and afterwards to consider the propriety of securing the subclavian either at its first or third part.

As to the justifiability of operating on the first part of the subclavian, the Professor made the following remarks:

The ligature of the first part of the subclavian has hitherto failed, on account of the almost uniform occurrence of secondary hæmorrhage. There are dangers in the operation—viz., anatomical difficulties, and the possibility of wounding the sac, or of finding the vessel diseased. Still, most surgeons would allow that if the ligature of a large artery involved little or no risk of secondary hæmorrhage, the operation might be repeated under similar indications to those which would justify any other operation of equal importance. The less or greater risk of secondary hæmorrhage depends on the possibility or impossibility of securing an artery so as to obliterate without dividing it. Now, this has been an object with the surgeons since the first case in which John Hunter tied the femoral for popliteal aneurism; and the methods by which the attainment of the object has been attempted are the temporary ligature, the *presse artere* or acupressure, and the silver ligature. None of these, except the *presse artere*, has as yet afforded definite proof of success, and this only exceptionally.

A case lent by the College of Surgeons of Ireland, showing obliteration of the femoral by this method for popliteal aneurism, proves, however, that an artery may be obliterated and an aneurism cured without division of the vessel. The only thoroughly satisfactory case of silver ligature is one in which Mr. Holmes employed the wire on the femoral artery for popliteal aneurism. In this instance the wound healed in a fortnight, and, though suppuration occurred, the ligature was not discharged from the wound. But silver wire is dangerous, for if tied tightly it cuts the coats of the vessel more deeply, and produces more and more rapid ulceration than the silk thread. In preventing secondary hæmorrhage its use is too uncertain to be preferable to silk. Carbolized catgut, when properly prepared, may be used for the ligature of a large artery with perfect success without dividing the external coat of the vessel or interrupting its continuity, while the ligature itself is absorbed,

and the wounds made over the vessels so tied often unite by first intention. The rapid union of the deep parts of the wound is a necessary condition for success.

The Professor then gave the history of the use of catgut for this purpose, mentioning especially the experience and comments of Sir A. Cooper (given in the "Surgical Essays" by Cooper and Travers, and in the 12mo. edition of his lectures published in 1829) and of Porta, who gives in his work, nine cases in which the operation was performed by himself, and two in which he assisted others. Porta no where, however, contemplates the occlusion of the vessel without its division; and, speaking of secondary hæmorrhage, says that "we shall never be able to annihilate its possibility by any method, or to reduce it within the limits which we observe in the lower animals." In the case where Sir P. Crampton used a ligature of moistened catgut in tying the common iliac, in 1828, if the catgut had been properly prepared, the ligature tied firmly and cut off correctly, and the wound and the patient been so treated as to produce speedy consolidation of the deep parts, there would probably have been no hæmorrhage.

After referring to Mr. Lister's tract "On Ligatures of Arteries on the Antiseptic System," Prof. Holmes remarked, that whether Mr. Lister's explanation of his method of dressing wounds be or be not the correct one, that method is very frequently successful in producing rapid union, especially in the deep parts of the wound. This being granted, and as it can be demonstrated that catgut ligature, under favorable circumstances, will gradually melt away in the tissues without causing ulceration, it can not be denied that the object which John Hunter and his followers so sought after have been discovered. A preparation of the lecturer's own case showing successful ligature of the carotid and subclavian arteries with carbolized catgut, and with no interruption of the continuity of either vessel, was exhibited. This specimen affords anatomical proof that a large artery in the human subject may be tied in such a manner that the wound may unite by first intention, and the

patient never be in any danger of secondary hæmorrhage; and, further, the case shows that the catgut ligature may be removed by absorption, the vessel remaining undivided. Mr. Holmes expresses his opinion of the carbolized catgut in these words: "No material can be imagined better adapted for a ligature than catgut long steeped in carbolized oil; it is perfectly tough, perfectly flexible, and perfectly smooth. It excites no irritation, absorbs no putrescent fluid, and, though it gradually melts away, yet holds the artery firm enough to close its tube permanently. Having used it in all large operations for about two years, I can testify to the latter fact, and I can say that I have never seen any sign of irritation produced by it, nor witnessed the escape of any of the little knots from the wound, and that I hold it to be a very much better and more convenient hæmostatic than torsion, and infinitely superior to acupressure. In fact, I have found it to possess all the comfort of the silk ligature, without its disadvantages. I do not, however, imagine that catgut, or any other ligature, can be applied to an artery with perfect success, unless the tissues around become rapidly united by first intention. An artery exposed in the middle of a suppurating cavity will, I believe, always soften and give way, and it was most probably because they failed to secure this prompt union of the deep parts of the wound that Porta in most of his experiments and operations, and Sir A. Cooper in the operations which he performed after his first successful one, failed to obtain this perfect result." The inference, then, is that the subclavian may be justifiably ligatured in the first part of its course in those innominate aneurisms which advance after distal ligature of the carotid.

The applicability of the distal operation in the treatment of aortic aneurism, and the probable reasons of its beneficial effect in this form of the disease, were next discussed. With respect to the ligature of the left carotid for aneurism of the arch of the aorta, there is no doubt that there are cases in which it is very beneficial, though there are no theoretical grounds for the believing that cure can be effected by this operation. The bene-

ficial result is no doubt produced by the obliteration of the part of the sac which was previously distended by the current of blood passing into the left carotid. When, then, the growth of the tumor can be traced upward toward the trachea of the left side, this operation is indicated, and when on the right side the distal operation on the same side will suggest itself. Finally the treatment of aortic and mixed aortic aneurisms by galvano-puncture was considered, and the difference in the clot produced in any albuminous fluid according as the positive or negative pole is used was mentioned; the positive pole producing a firm coägulum, and the negative a large, frothy mass formed of minute coägula.

Mr. Poland's summary of Abeille's cases prove that the clots produced by electricity may be as efficacious in the cure of aneurism as those produced by other means; but it must be allowed that there is at present much uncertainty as to the value of the method, and as to the effects of any given operation, and many details as to the method of employing this agent have to be cleared up before our estimate of the value of it can be formed with certainty. Prof. Holmes is disposed to think that both poles should be used, that the action should continue for a considerable time under anæsthesia, and that the needle should be partly coated with vulcanite, so as to defend the soft parts covering the tumor. The uncertainties connected with its employment, however, are sufficient for discarding electro-puncture in cases of aneurism of arteries accessible to pressure or ligature, as these methods are safer and more reliable.—*Med. Times and Gazette.*

ART. II.—THE ACTION OF MERCURY ON CHILDREN. By WILLIAM STEPHENSON, M. D., Physician to the Royal Hospital for Sick Children, London.

Dr. Stephenson, after calling attention to the fact that pep-

sin is often more useful than mercury in children, in whom there is derangement of the alimentary apparatus, even when the latter is apparently more hepatic than stomachic in its origin, remarks in substance as follows: There is a very prevalent error that children are less susceptible to the constitutional action of calomel than adults. This opinion is based solely upon the difficulty of salivating young children. The truth is, children are more readily affected and more readily injured by mercury than adults. We have not salivation as a guide, but take another index. In syphilitic children I have frequently observed decided results in six days from a grain of gray powder night and morning. Although this is a therapeutic rather than a physiological action, it yet indicates that the system is brought under the influence of the drug.

A smaller amount properly given will, however, produce very perceptible effects. Mercury produces in children a state of pallor, feebleness, sickness and fretfulness, with green mucus evacuations. The result depends much upon the method of administration. The effect is produced in two ways: First, by the irritant action on the alimentary mucous membrane; and secondly, by the action on the system in general. Much of this depressing influence may be avoided by careful administration. Another effect is in the production of anæmia. This I regard a most important symptom to be watched for in the administration of mercury to children. If we take the depressing influence and the production of anæmia, and not salivation, as our tests, we may affirm that children are at least as easily affected as adults by mercurials.

In simple intestinal derangements, where a healthy child is suffering from constipation, and passing white chalky stools, I have treated some such cases with mercury alone. The results have been: First, griping, without change in the character of the motions; then the passages are more frequent, softer, and mixed with green; then the mercurial motions proper are obtained and continue for some days. Stopping the remedy; in favorable cases a return to healthy evacuations takes place, but

very gradually, and seldom without some other remedial agency; in other cases, the old chalky motions again appear.

A dose of castor oil and proper regulation of the diet will often bring about a more speedy result; and when compared with rhubarb and phosphate of soda, the action of mercury is far from satisfactory.

In cases where there is diarrhœa with copious white stools, mercury has seemed to do more harm than good. In the obstinate and protracted retching of a bilious attack, I have seen the vomiting arrested by a few grains of calomel. I employ it in some cases in robust children, where the vomiting is obstinate and the bowels confined, without a tendency to irritation of the mucous membrane. It should be given in full dose, and not repeated. While I would, then, limit the use of mercury in intestinal affections, I believe it is of great benefit in certain constitutional affections. In infantile syphilis I have the greatest confidence in it. Experience has taught me that in cases where I have sought to produce change by the use of the iodide or other preparations of potassa, but signally failed, I have succeeded by administering mercury.

Dr. Stephenson believes that in syphilis mercury acts not on the blood, but upon the tissue cells, and that it does not cure syphilis by removing the diathesis, but by modifying the results of the diathesis; and hence, in a strict sense, it does not cure syphilis.

His experience teaches him that mercury acts most beneficially in the sluggish constitutions of the strumous and syphilitic diathesis, and most injuriously through the tubercular diathesis. His conclusions are as follows:

1. Mercury may be employed to influence the constitution with perfect safety, and without any injurious effects on the general health.

2. That to obtain its therapeutical action, it is not necessary to produce its visible physiological action, and that it becomes injurious so soon as these are manifested.

3. That in children its injurious effects are as easily induced

as in adults, but must be looked for in its depressing influences and deterioration of the blood.

4. That it should be only used to stimulate nutritive changes, not to alter the blood, and that it should be administered occasionally, and at intervals, not continuously.

5. That its use in modifying acute inflammatory action is very limited, but that there can be no question as to its power over the products of inflammation, in starting the processes of resolution and absorption.

6. That no amount of abuse of the medicine can in any way invalidate the results of its effects when it has cured where other remedies have failed, or lessen in any measure the position which I here defend of a judicious use of the medicine.—*Edinburgh Med. Jour.*

ART. III.—A CLINICAL LECTURE UPON SORE NIPPLES AND MAMMARY ABSCESS. By FORDYCE BARKER, M. D., Clinical Professor of Midwifery and Diseases of Women in Bellevue Hospital Medical College, New York.

Gentlemen,—All of you may obtain a great reputation by performing some important surgical operation; but the unfortunate fact with regard to such reputations is, that they are not easily secured, because the opportunities only rarely present themselves for such operations; and, indeed, you may pass a lifetime in an active practice, without once being called upon to perform an ordinary amputation of the thigh or arm.

Your reputation, however, may be very much jeopardized, if not ruined, if you are not able to treat successfully a case of sore nipples or mammary abscess, and these are the cases you will see, perhaps, every week in your life. In these cases the responsibility will always fall upon the doctor, and unless he is familiar with their management the weight may prove more than he can well bear.

In text-books in general, there is a sad deficiency with regard

to descriptions of the different forms of these troubles, the proper management, and the exact and appropriate treatment for each definite form.

Various articles, with which every practitioner is more or less familiar, are recommended for their cure, without any definite rules being laid down, where one or another will be applicable. These remarks apply with equal force to both sore nipples and mammary abscess. The forms of sore nipples are these: First, inflammation. This generally occurs in those cases where the nipple is naturally contracted, or in those cases, which are not at all infrequent, where the nipple is almost completely absent.

The child, when placed at the breast, has great difficulty in getting hold of the nipple, especially when the breast is distended, which renders the nipple still more retracted; it pulls away at it, and as a result of the irritation to the breast, inflammation of the nipple takes place. This inflammation of the nipple may by propagation pass into the lacteal ducts, and we may have mammary abscess as a consequence of that.

Second, fissure or erosion of the nipple. These fissures of the nipple are of two forms. One comes from inflammation of the nipple, but there is another form which exists just at the base of the nipple, and gives the most intense pain and suffering, the patient, perhaps, bursting out into a profuse perspiration as the child is placed at the breast.

The next form of sore nipple is the ulceration which I have referred to in connection with the case now before you. The surface at the nipple is red and denuded of its cuticle; the nipple is very much retracted, and in this case, there is a fissure at the top. The pain is very intense, and it may be that the woman experiences as much suffering from this as from anything else during the entire puerperal period. The process does not generally confine itself to the nipple alone, but the areolar tissue around the nipple becomes inflamed, and as the inflammation becomes more intense, perhaps one-half or two-thirds of the nipple becomes entirely destroyed in the process. These three forms are distinctly and easily recognized; and

now a few words with regard to the treatment of these different forms.

In the first place, for drawing the nipple out. There is a great difference among authors as regards the propriety of applying the child to the breast immediately after the confinement has been completed, and also as to the proper time when it should be done. Some writers recommend that it should be done as soon as possible after delivery. The reason given for this early application of the child to the breast is, that the child by nursing stimulates the breast, which excites reflex action in the uterus, thereby producing uterine contraction, which will place the woman out of all danger from post-partum hæmorrhage.

With reference to that point, I can say I do not consider it to be sound practice. I adopted it for some years, but have given it up entirely. You can procure uterine contraction, which will place the woman out of all danger from post-partum hæmorrhage, by means which are far less exhausting for the patient than the resort to the troublesome efforts of the child at nursing. I now advise to get the woman completely restored after the fatigue of confinement before applying the child to the nipple.

The first stage after parturition is that of exhaustion. The whole effort of the system has been used to accomplish this result, and so complete is the exhaustion, that it is very commonly manifested by nervous chills. If the woman is permitted to get a few hours of sleep, her exhausted nerve-power will be restored, and then is the time to direct that the child should be placed at the breast.

The main reason for this is, the breast is not now distended, and the nipple is easier drawn out. The traction excites the more rapid secretions from the breast, and the first secretions from the breast are a great benefit to the child as a laxative, being its first proper food. It is then that the nipple can be more readily grasped by the child and properly formed. If, however, you wait until the secretion of milk has taken place,

and the breast has become distended, before applying the child, the distention itself causes obstruction to a free flow through the ducts, and the nipple and breast may become a very great source of irritation.

There are some cases in which the nipple congenitally is so short that the child can not hold it, and it must be drawn out by some mechanical appliance. The most common method resorted to for accomplishing this is the old-fashioned application of a bottle, which has been filled with hot water and emptied, and the use of the breast-pump.

A few words with regard to breast-pumps. Most of them have so small an opening in the part applied to the breast that the nipple is constricted, and the milk can not flow at all after the first two or three exhaustions of the instrument.

The essential requisite for an efficient breast-pump is a large bell-shaped extremity, so that the nipple is not at all constricted by the narrow diameter which is applied over it.

The pump which meets the indications most satisfactorily, and which has come to my notice, is what is called Mattson's breast-pump, and it is a most excellent instrument.

With regard to treatment of sore nipples, the following are the rules which chiefly govern me in the management of these cases: If the nipple is inflamed, apply a poultice until the inflammation is subdued, and then apply a solution of nitrate of lead in glycerine, ten grains to the ounce. This is also the most complete and perfect prophylactic against the occurrence of sore nipple that I know of. This solution should be applied immediately after nursing, having first washed the nipple perfectly clean.

The application must be washed off every time before the child nurses. It is almost a specific, when properly used against excoriations and ulcerations. If the tendency is quite strong to sore nipples, the solution may be used of the strength of 15 grs. to the ounce, or even ℈i.; but as a rule the 10-gr. solution is sufficient. Next, where the cuticle is denuded, and we have a raw surface, or it becomes so irritated that there is a tendency

to an abrasion, the indication is to form an artificial cuticle, which will entirely protect the parts, and yet permit the milk to pass through it. For this purpose collodion has been extensively used. The objection to the collodion is this, that it contracts as it dries, and thus itself becomes a source of superficial irritation and discomfort, and does not readily permit the flow of the milk. I have used for this purpose, and with the most satisfactory results, the compound tinc. benzoin. Wipe the nipple dry after the child has nursed, and with a camel's hair brush apply four or five coats of this tincture.

The first application may produce some burning, but when once applied this will be entirely overlooked, and the woman will desire its reäpplication. This forms a most excellent artificial cuticle, and at the same time permits the flow of milk without obstruction. Cicatrization will take place under this coating, and the patient will thank you for the benefit received.

When the fissure is at the base of the nipple, very small it may be, but accompanied by the most severe and agonizing pain, the most satisfactory method of management is to touch the fissure with a fine point of nitrate of silver, and apply over this the comp. tinct. of benzoin as before.

When the inflammation and ulceration have gone on to such an extent as to destroy the surface of the nipple, and there is danger of the inflammation extending back to the mammary gland, do not allow your patient to torture herself by allowing the child to nurse. Remove the child entirely, and empty the breasts by the breast-pump or by rubbing.

I then use as an application in these cases the following—

℞.—Rose Ointment, ℥i.;
Carb. Magnesia, ℈i.;
Calomel, grs. xxx. M.

These ingredients should be rubbed together very carefully, and it should be freshly prepared, perhaps every twenty-four or thirty-six hours. If the child be permitted to nurse at all, it should be done entirely through an artificial shield, and the

best shield is one made of the cow's teat. The objection to the India-rubber shields is, that there is an offensive odor emitted from them, and they are very apt to make the child's mouth sore.

If, however, it becomes necessary to use the shields which are in the market, in selecting them get a broad base, what is called the L-shaped glass, in the same manner as in the selection of the breast-pump. The ordinary nipple-shields seen in the stores are simply abominable.

The next subject which is immediately connected with the one just under consideration, is a very troublesome complaint—viz., mammary abscess. This woman who is now before you has been confined about one month, yet it is only three days ago that she began to complain of her breast, and since that time suppuration has taken place.

This is an important point, and one which is often overlooked in the books. It will be seen that the whole surface of the gland about the nipple is inflamed, the woman had a chill, has a fever, etc., etc. This is probably one of those cases which is the effect of the peculiar poison which develops puerperal fever in some cases, puerperal peritonitis in others, and mammary abscess in others. There are three different forms of mammary abscess. First, inflammation of the cellular tissue surrounding the nipple and external to the breast; second, inflammation of the substance of the gland itself; third, inflammation of the areolar tissue between the gland and the thorax. The first form may result from irritation, and is nothing more than a pure simple phlegmon, requiring the same treatment. It usually terminates rapidly, is not attended with the constitutional shock which accompanies glandular inflammation, and is to be treated the same as phlegmonous inflammation elsewhere. As soon as fluctuation is detected, the question may arise whether the escape of the pus should be permitted to take place spontaneously, or whether the breast should be opened by the surgeon. The amount of constitutional disturbance is to decide that, and if it is decided to open it, the incision should not be

made within the areola, because the retraction which is incident to cicatrization will spoil the nipple for future use. The sooner this discharge takes place, the sooner the healing process will be completed, and the breast restored to a healthy condition.

In case the gland itself becomes inflamed, it is attended with more constitutional disturbance. There is headache, chills, fever, full pulse, high temperature, etc., and yet even greater constitutional disturbance, if there is a tendency to the formation of multiple abscesses. If these cases are seen at a very early period of their formation, when there is great tenderness, high temperature, fever, etc., pulse 108, perhaps 120, it may be well to try to abort the inflammation. For this purpose, I give the woman ten grains of Dover's powder, with an alkali, paint over the surface of the gland with tinct. iodine, and cover it with a warm poultice or cotton padding covered with oil-silk. Empty the breast with a pump, and in most cases you will arrest the whole thing at once.

The trouble is, that the patient does not see the physician until this period has passed, and then suppuration must be favored by poultices. Internally the patient must be ordered as full doses of quinine as she will tolerate.

As soon as fluctuation is detected, open the breast at the lowest point, because otherwise pus will burrow between the tissues of the gland, become a source of irritation, and produce another inflammation.

The third form is called the sub-glandular, and is attended with still greater constitutional disturbance. It has none of the external redness present in other forms, because it is situated between the gland and the thorax.

The gland scmetimes becomes very prominent. The inflammation is attended with intense, severe pain, rigors, chills, and yet upon the external surface there may be no special intimation of its existence. The most significant symptoms are, that the patient complains of difficulty of breathing, on account of pain produced, and, when present, the prominence of the gland.

These cases are generally exceedingly tedious, and sometimes dangerous, because the inflammation is so deep-seated that the pus between the gland and the thorax burrows about, forming sinuses and extensive fistulous tracts, which may be exceedingly troublesome and exhausting from the profuse discharge and constitutional irritation which is produced.—*N. Y. Medical Record.*

ART. IV.—CASES OF HYDROTHORAX TREATED BY THORACENTESIS AND BY THORACENTESIS AND INJECTIONS OF IODINE. By ROBERTS BARTHOLOW, M. D., Cincinnati, Ohio.

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No one has more happily than Niemeyer expressed the present state of opinion on the value of thoracentesis in the relief of pleuritic effusions. "Considering our slender ability to excite, or even to hasten reäbsorption of pleuritic effusions by means of internal medication, and the discovery that their evacuation by surgical means is attended by much less danger than was formerly supposed, the frequent and early practice of such operations in cases of pleurisy with effusion, must be considered an important advance in therapeutics. It must be evident that every additional day, during which the lung is exposed to pressure, and the longer the time allowed for cells to multiply in the exudation, so much the more are the chances of complete recovery diminished, and the danger of a fatal termination increased."*

We are largely indebted to our own countryman, Dr. Bowditch,† for the more general introduction of thoracentesis. He demonstrated the comparative harmlessness of the operation itself and the marked relief always and the permanent cure that frequently results from its performance.

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* Text-book of Practical Medicine, vol. i., p. 271.

† American Journal of the Medical Sciences, April, '62, and January, '60.

In England Dr. Hughes in a valuable paper,* and Mr. Cock in some observations appended thereto, urged the operation of thoracentesis for three different objects:

To accomplish a cure.

To give relief in cases of severe oppression.

To facilitate the cure by other means.

This paper was the more opportune because Dr. Henry Bennet published in the "Lancet" of December 30, 1843, some very discouraging observations on the result of this operation. Famous surgeons have, it appears, been unfortunate in the performance of thoracentesis. Thus Boyer lost every case, Dupuytren was successful in only two in fifty cases, and Sir Astley Cooper saw only one successful case. It is difficult, in view of the usually good results now obtained, to account for these very unfavorable statistics of the older surgeons.

In France the operation of thoracentesis is very frequently and very early performed. The practice at present most in vogue in France, is to evacuate the fluid as soon as it is ascertained to exist in all cases of pleurisy. Dr. C. Paul,† Agrégé de la Faculté, in a late paper gives the statistics of thirty-six cases of thoracentesis in which thirty-one were cured without any return of the effusion. In a more recent paper he informs us that he has treated eight cases of acute pleurisy by early puncture of the chest with remarkable advantage. He mentions a fact not generally known, that when the effusion coägulates after being withdrawn that reäccumulation is not apt to take place. Trousseau,‡ to whom the revival of this operation in France is chiefly due, has given an admirable historical account of it in his lectures.

In Germany, much attention has been paid to thoracentesis within a few years. The distinguished Ziemssen, of Erlangen, at a recent meeting of the German Medical Association at

* Guy's Hospital Reports, Second Series, vol. ii.

† Bulletin Général de Thérapeutique, vol. lxxvii., p. 619. Also vol. lxxxi., Livraison 2d.

‡ Clinique Médicale, etc., vol. i., p. 616.

Dresden, section of internal medicine, read a letter strongly urging this operation for hydrothorax.* Skoda, of Vienna, has long been an advocate of the operation, as has also Traube, of Berlin. In "Schmidt's Jahrbücher," vol. 939, p. 175 et seq., there is an excellent résumé of opinions of eminent authorities in regard to the indications for and the utility of this operation. Not to waste further time in these historical references to recent views on this topic, I pass to narrate my own cases.

CASE I.—Mr. Craig, a medical student, came to me in the spring of 1868, with an enormous accumulation in the left pleural cavity. The effusion succeeded an attack of sub-acute pleuritis, for which he was treated in the ordinary way. The usual remedies had been employed to secure absorption, but without success. The left side was two inches larger than the right; the intercostal spaces were bulging; the heart was displaced entirely into the right side; the respiration was much embarrassed; the pulse rapid and weak; the body emaciated, and a condition of extreme debility existed. The usual physical signs indicating effusion, collapse of the lung and compression of the organ at its root, were present. As the effusion had already existed from the previous September, it was considered probable that the lung was bound down by adhesions. Thoracentesis was performed, and a gallon of clear, straw-colored serum was withdrawn, with remarkable relief to the breathing. The heart moved over nearly to its normal position; the superior lobe of the lung expanded somewhat, but as a large cavity remained, a reäccumulation of fluid was confidently anticipated. In a few weeks Mr. Craig presented himself again, the cavity having filled, but his general health had meanwhile much improved. He was again tapped, and three quarts of fluid were withdrawn. Not to weary you with prolix details, I may state that he was tapped fifteen times in the ensuing three years, the interval between each operation regularly increasing in duration. I might hesitate to make these statements, if numerous

* Schmidt's Jahrbücher der Gesammten Medicin. Vol. cxl., p. 133.

witnesses had not been present at these operations and heard Mr. Craig's story from his own lips. Nearly a year has now elapsed since the last puncture, and the cure seems to be complete. Considerably more expansion of the lung has taken place than was at first hoped for, but the lung is far from its normal size and expansibility, and the cavity has contracted in all diameters, yet Mr. Craig is in good health and follows a laborious occupation with comparative comfort. In this case I first used a means of treatment which has been lately strongly urged by French physicians. I refer to the injection into the cavity of a solution of iodureted iodide of potassium. The strength of the solution first used was two drachms of the iodide of potassium, and one drachm of the tincture of iodine to four ounces of water.

This iodised solution was gradually increased in strength each successive tapping until it reached one ounce of iodide of potassium and four ounces of the tincture of iodine to a pint of water. The solution of this strength produced a sense of heat in the chest and a decided iodide of potassium taste in the mouth, but no other ill result. The advantages of this practice seemed to be most clear, for the accumulation of fluid rapidly diminished, and since the last strong injection, a cure appears to have resulted.*

CASE II.—This case occurred in the practice of Dr. Hitt, of Greensburg, Indiana. The presence of fluid in the left thoracic cavity was diagnosticated by my colleague, Prof. Graham, and myself. An explanatory puncture confirmed our diagnosis, and the trocar evacuated six ounces of sero-purulent fluid. Dr. Hitt subsequently drew off several ounces, and at my suggestion injected the cavity with the compound solution of iodine. The fluid accumulated the third time, succussion could be easily

* Dr. Cundell Juler, after the details of the case had been read, stated to the Academy that he knew Mr. Craig, had frequent opportunities of seeing the progress of the treatment, and had within a few days heard that he was well.

induced, showing the presence of air, and hectic supervened. Spontaneous evacuation of fluid through the lung then occurred, and a speedy and remarkable improvement of health took place. The subsequent history I have not learned.

CASE III.—A boy aged twelve, son of a well-known citizen, had some pain in the left side about six weeks ago, which attracted little attention, as he had frequently suffered from muscular pains in the same region. About four weeks ago it was observed that he got out of breath on slight exertion, and that he had a slight cough. A homœopathic physician saw him and diagnosticated hepatization and effusion. When I was called the following was his condition: Complete flatness on percussion over the whole of the left chest; absence of respiratory and vocal sounds, except bronchial voice and respiration over the root of the lung; no increase in size of the chest; no bulging in the intercostal spaces; heart displaced beyond the median line to the right. I advised tapping without delay, for the reasons given so succinctly by Niemeyer. My colleague, Dr. Graham, who subsequently saw the case with me, coïncided with me in the necessity of this measure. Paracentesis was performed on the next day with an ordinary trocar, and forty ounces of clear, straw-colored serum were removed. The lung readily expanded; the heart returned to the normal site; and nothing remained to indicate the lesions except some dullness over the base of the lung, and some friction sound due of course to plastic deposits. Most remarkable improvement in the general condition of the patient took place on the removal of the fluid. Several weeks having now elapsed without the recurrence of the effusion, the respiration and the general health having meanwhile improved, the most favorable prognosis is justifiable.—*The Clinic.*

ART. V.—THE BLISTER TREATMENT OF RHEUMATISM. By DR. T. R. PEACOCK, of St. Thomas' Hospital, London.

I have now been in the regular use of the blister treatment of rheumatism since 1865. When I first employed it, it was only tentatively, one, two, or three blisters being applied at the same time or in succession, and in conjunction with other remedial means, and the general impression which I formed was not very favorable. Subsequently, I was induced to apply the blisters much more freely, three or four, or even six, at a time, and in rapid succession a still larger number, and I have been led to form a high opinion of their usefulness when thus used, and to confirm what has been said in favor of the treatment by Dr. Davies. The blisters are generally two or three inches wide, and sufficiently long to encircle the limb. They are placed above the chief joints that are affected, and are usually put on in the after part of the day; in the morning, or when they have risen sufficiently, the serum is let out, and the surfaces are covered with warm linseed meal poultices, and these are continued for several days. The treatment has been objected to as unnecessarily severe and attended with much suffering to the patient; but this is not correct. I scarcely remember an instance in which the patient, though specially questioned on the subject, has found fault with the treatment; and I have often heard them say that the pain caused by the blister is not to be compared with that of the rheumatism. Nor have I ever seen any serious inconvenience of any other kind caused by the blisters. Sometimes, however, there is a temporary increase of suffering when the blisters begin to draw, and the temperature rises, and the patients are restless at night; but generally there is very marked amendment in the morning, both the swelling, tenderness, and pain being reduced, and the constitutional disturbance relieved. In some cases, however, the local symptoms may not be immediately benefited to any marked degree, and the blisters must be repeated, being applied above the seat of the first vesication; or, after a few days' cessation, the same joint may be again affected, and in this case, too, the blistering

must be repeated. The occurrence of second attacks in the joints first affected is not, however, by any means confined to cases treated by blisters, but equally occur when constitutional means have been had recourse to.

Generally with the local means, constitutional remedies, especially the bicarbonate and nitrate or tartrate of potash, are given more or less freely, according to the severity of the symptoms. The cases in which I have employed the blister treatment are the following:

First, when several joints are coïncidently and severely affected, the sufferings of the patient are great, the constitutional disturbance severe, and the temperature high; in cases of this kind, three, four, or even six or more, blisters are applied immediately the patient is seen; and as many more may be put on in the course of a few days, in rapid succession, as other joints are involved, or when those first blistered are not materially relieved or again become affected. From this treatment I have seen the most satisfactory results, both the local and general symptoms being greatly relieved by the free blistering, and the duration of the disease being curtailed. It is evident, also, that if the active stage of the disease be shortened, as this is the period during which the internal complications are most apt to occur, the frequency of such complications will be lessened. It is in cases of this kind that the blister treatment is most efficacious, the benefit obtained being apparently directly proportionate to the number of joints coïncidently affected, to the severity of the local symptoms, and to the freedom with which the blisters are applied to the whole of the parts involved, so that an immediate and decided impression is produced upon the disease. In cases where only two or three joints are affected, though these may be all blistered, the relief obtained to the constitutional disturbance is less decided, and where the pains are rather diffused over all parts of the body than limited to certain joints, the remedy can not be satisfactorily employed. I have mentioned that the occurrence of internal complications may be prevented by the early and free

employment of blistering; but in some cases we have proof of much more decided benefit being produced, for I have seen cases in which there were very threatening symptoms of cardiac disturbance, such as are ordinarily followed by serious disease of the pericardium or valves, entirely relieved by the free blistering of the inflamed joints, and the cardiac symptoms apparently arrested.

In cases of this kind, the free discharge from the vesicated surfaces operates apparently as an outlet to the *materies morbi*, and so causes the disease to exhaust itself on the external and less important parts of the body. So satisfied have I been with the effects of the blister treatment in cases of intense rheumatic fever, that I have gradually reduced the use of the internal remedies, giving much smaller doses of the bicarbonate or nitrate of potash, or only employing coïncidently some slight diaphoretic, as the nitrate of potash.

Secondly, I have known very satisfactory results from the blister treatment in cases in which the symptoms, both constitutional and local, were less severe; but where the patient's strength was greatly reduced, either from previous attacks of rheumatism or other causes, or when the heart was already seriously diseased. In cases of this kind, the use of remedies which exercise any depressing influence is to be avoided, if possible. I have, therefore, sometimes relied on the blister treatment alone, or in combination with tonics, quinine, and iron, and with very good results. The blisters, even though freely applied, do not depress the strength so much as the use of alkalies or other constitutional remedies. When the heart is diseased from a previous rheumatic attack, and when, as is generally the case, the patient is very anæmic, the use of depressing remedies is especially objectionable. In such cases, also, the attack should be arrested as quickly as possible, lest the heart should again become involved; and I know no means so likely to accomplish this as the free blistering of all the affected joints.

Thirdly, another class of cases, in which the rheumatic affec-

tion rather involves the smaller joints, what is often called rheumatic gout, and in which the constitutional disturbance is of a more sub-acute character, is also very often benefited by the use of blisters, though less decidedly than the two other forms of disease. In cases of this kind the blisters need not, however, be employed as freely as in the former cases; I also generally combine them with the internal administration of small doses of iodide of potassium, bicarbonate of potash and colchicum, and often with bark or quinine. As we all know, cases of this kind are very apt to be tedious, whatever be the plans of treatment which we adopt; but I believe that the combination of local and general remedies which I have named is generally the most efficacious means of relief.

Lastly, there are cases in which the disease rather assumes the neuralgic than the ordinary rheumatic form, where the pains follow the course of certain nerves, and are often very persistent, in which the application of blisters is very beneficial. This treatment is a very old one, but it is one which has, perhaps, of late years, received less attention than it deserves. —*Brit. Med. Jour.*

ART. VI.—PEPSIN. By R. T. EDES, M. D. [Read before the Dorchester Medical Club, Massachusetts.]

Pepsin is the peculiar ferment present in the gastric juice. As a physiological experiment, the juice itself can be used for artificial digestion, but obviously can not be obtained in sufficient quantity for therapeutic application. Various methods have been employed to obtain the active principle in a form suitable for medical use. Boudault's, Morson's, Beal's, and various others have been prepared in Europe, but it is sufficient to mention only the three first, as the others have not come into use here. "The pepsin of commerce is either mucus of the stomach scraped off and dried, or a mixture of pepsin, pep-

tones and starch, containing a little lactic acid."* Beal's corresponds to the first part of the description, Boudault's and Morson's to the second. By far the larger part of these consists of starch, as a diluent is necessary to enable them to be dispensed."

The process of Mr. Scheffer, of Louisville, consists in macerating the chopped mucous membrane of the hog's stomach in acidulated water, and, after allowing the mucus to settle, precipitating the pepsin by a saturated solution of common salt.

The precipitate is dried upon a cloth, its digestive strength estimated by experiment, and then mixed with sugar of milk in such proportion that 10 grains dissolves 120 grains of hard-boiled white of egg, in four to six hours, under the appropriate conditions.

Although this experiment can not be considered as exactly representing the amount of work done in the stomach, yet it furnishes the only available means of comparison between different preparations. I have examined, in this way, Boudault's neutral, Morson's, Procter's, Hawley's, and the "Aromatic Liquid Pepsin," which has been extensively advertised within a few weeks. Procter's and Hawley's, the first of which is avowedly, and the second probably, made by Scheffer's process, were exceedingly efficient, leaving but a small residue, and that pulpy and friable. The action of Morson's and of Boudault's was very slight, in fact, hardly perceptible, and the same is true of the "Aromatic Liquid Pepsin."† These experiments were performed only twice with Boudault's and Morson's, with the same result, since there seems to be no reason for using imported preparations, which are more expensive, less elegant, and vastly less efficient than those which we have furnished us here. As regards the "Aromatic Liquid," the experiment was repeated twice more with a similar result.

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* Gmelin's Hand-book of Chemistry. 1870.

† Since writing this sentence, I have noticed in the "Practitioner" an examination of three English preparations, Savory & Moore's, Morson's pepsina porci, and Squire's. The digestive power of all was extremely slight.

I did not succeed in making Procter's, which was the preparation used in subsequent experiments, dissolve the full amount of albumen, but it may easily be imagined that the variation in the amount of heat, in the degree of comminution, and especially in the amount of stirring and shaking, might have a great influence on the quantitative result. In each experiment, however, the different preparations were treated in a precisely similar manner in these respects. At first, the residue was weighed to determine the amount of albumen dissolved; but owing to the difference in the amount of water absorbed, and the difficulty in properly drying the residue, especially when partly digested, I think that the appearance of the fragments of albumen is, for practical purposes, quite as reliable.

It is very well known that many manufacturers, being aware that sundry other drugs have their uses in the treatment of dyspepsia, but forgetting that, in physiology and therapeutics, two and two do not always make four, have combined pepsin with any three or four of these drugs in the much advertised, and, I fear, much used compound aromatic fragrant tonic and invigorating elixirs of pepsin, bismuth, strychnia, quinia, cod-liver oil, lacto-phosphate of lime, and Liebig's extract of beef.

Mr. Scheffer, whose experiments upon pepsin have extended much beyond the preparation of the most reliable form of this useful agent, has shown not only that the pepsin is usually precipitated by the alkalinity of the fluid used to hold the bismuth, in solution, but that the bismuth itself precipitates the pepsin. The action of an elixir of bismuth, strychnia and pepsin is shown in this bottle, which may be called a visible dyspepsia, The pieces of albumen being shrunken, dark and tough, without the faintest trace of solution. I also tried a granular effervescent preparation of the same kind, with absolutely no digestion. Finally, I added the ordinary sub-nitrate of bismuth to a bottle containing the usual materials, with the result which you see (no digestion).

I think we may fairly conclude that any preparation purporting to contain both bismuth and pepsin, contains *none* of the

latter; and also that bismuth and pepsin in the form of powder is not an eligible combination. If it is desired to give both, they will be more efficient separately.

As regards alcohol, Mr. Scheffer stated, in one of his earlier essays, that "dry pepsin, precipitated with alcohol from its solution, did not act at all on albumen." This he afterwards found to be a mistake, since it was not from an acid solution that he obtained a precipitate by alcohol, but from one rendered neutral by carbonate of soda. The carbonate of soda permanently modifies the digestive properties of pepsin, and destroys its action on freshly-coägulated albumen. It still acts, in a different manner, upon partly digested albumen. He showed, however, and this phial shows the same thing, that alcohol does not, in small quantity, prevent the digestive process, but retards it. You notice that the amount of albumen remaining, although evidently acted upon, is much larger than that in the standard phial. It would seem, then, that a wine of pepsin may contain some of the ferment, although, from the activity of the mucous membrane, after the wine has been prepared from it, the quantity extracted can not have been large. Another property of pepsin, which I have not before mentioned, indicates that it is to be found in rennet wine or liquid rennet. This is used for the purpose of coägulating milk, which it will do at ordinary temperatures. This coägulation is not due to its acid, as was found by comparing its action with that of dilute muriatic acid of about the same strength. If to the tube containing milk unacted upon by the acid, pepsin was added, coägulation then took place.

Also, if the rennet wine were *boiled*, it lost its action upon milk; so that, as far as its power in coägulating milk goes, rennet wine behaves like an acid solution of pepsin. The proof, however, must be in the direct experiment, the result of which you see. [A small amount of digestion. The temperature was a few degrees lower than in previous experiments, and the digestion of the albumen in pepsin, made at the same temperature for comparison, also took place slowly.]

I have tried no preparation of the wine of pepsin. There seems no reason why these should differ from the liquid rennet.

It has been thus far assumed that the conditions in these experimental phials and in the human stomach were nearly the same. It is fair, however, to state certain points of difference. In the stomach, the agitation and mixture of the solvent and food is, or ought to be, much more thorough. In the stomach, the portion digested is absorbed nearly as fast as it is formed.

In the stomach, certain incompatibles may be removed before the action of the pepsin is completed. This is chiefly true as regards alcohol, which, in ordinary doses, is probably absorbed long before the time for the digestion of an ordinary meal is over. It is not infrequently objected that the amount of albumen dissolved by pepsin is entirely insignificant in proportion to the amount usually taken at a meal, even by an invalid. This is true, if we consider only the amount dissolved, with a given amount of acid, in these experiments, which are intended to represent only the relative value of different varieties. Mr. Scheffer, has, however, shown that, under conditions resembling more closely those of stomach digestion, pepsin may be made to dissolve much more. By the successive addition of acid, water and albumen, the amount of the latter dissolved can be very much increased, so that half a grain of purified pepsin, that is the pepsin before the addition of the sugar of milk, dissolved 1,500 grains of albumen, and perhaps would have done more.

In another experiment, he found that, upon adding a saturated solution of common salt to the clear fluid obtained by the digestion of albumen, a precipitate was produced which, in its turn, being dissolved in acidulated water, digested still more albumen, and, by continuing this process, twenty grains of saccharated pepsin dissolved at the rate of 4,000 or 5,000 grains. That is, we see that pepsin is a true ferment, and not a chemical reăgent; so that, although the amount of albumen digested in the test-tube in a given time furnishes a fair test of the value of the preparation, it does not limit its activity in an organ

which absorbs more or less of formed products, and which, for all we know, may be capable of rapidly returning to its own interior the ferment which, while digesting other albuminoids and giving to them in their turn catalytic power, does not lose its own activity.

Conclusions.—Much of the dissatisfaction with pepsin expressed by physicians, is due to the use of preparations which contain little or none of it.

The pepsin made by Scheffer's process is, by far, superior to any other in ordinary use.

The wine is feeble, but not necessarily inert.

Elixirs of pepsin and bismuth are humbugs.

Pepsin should be administered with an acid, and with as few drugs as possible. A small amount of alcohol is not inadmissible, but a large amount retards digestion.

Its beneficial action is *not limited* by the amount of albumen which it dissolves in a test-tube without change or renewal of any of the contents.—*Boston Med. and Surg. Journal.*

ART. VII.—THERMOMETRY. By CHARLES E. BUCKINGHAM, M. D., Boston.

It occurred to me that many of the statements in the treatise of Wünderlich, published by the Sydenham Society, did not agree with the observations upon my own patients. The range of temperature with them, and also with persons apparently in good health, was much larger than he allowed. It seemed as if, in my own records, taken early in the morning, *before food*, a much greater depression was observed than anything shown in his records. Temperature, so far as I can find out, is usually recorded *after* the morning meal, at noon, and *after* the evening meal. During the month of November, I made the following personal observations: There were six observations in the day. As a rule, the first was while dressing in the morning;

the second was immediately after breakfast; the third just before, the fourth just after dinner; the fifth and sixth before and after supper. The instrument used was Cassella's 14,543. It was placed under the tongue, and retained there not less than six minutes. Anything out of the regular course was noticed in making the record.

On examining these observations, I was much surprised to see that there is a variation between the lowest and highest points reached of four and four-tenths (4.40) degrees, or from 95° to 99.4°. Take, however the record made after eating, and the variation is only two and two-tenth degrees (2.2); while taking the record made before eating, sometimes when very much fatigued, and sometimes not at all so, and the variation is four and two-tenths (4.2) degrees, or from 95° to 99.2°.

The use of a hot bath in the morning is indicated in the record. Its effect on the morning of the 26th was well worth noticing, raising the temperature of the body, as it did, a whole degree, and this effect was increased another whole degree by the breakfast.

These facts, it seems to me, are well worth the while of medical men to study. It may lead to more care in fixing hours for the use of the thermometer; and if the experience of others should give similar results, the anxiety caused by unexplained variations might be diminished.—*Boston Med. and Surg. Jour.*

ART. VIII.—THE INFLUENCE OF ALCOHOL ON THE TEMPERATURE OF THE BODY.

Observers in previous years were accustomed to ascribe to alcohol the power of elevating the temperature of the human body when introduced into the stomach, being led to this conclusion by the subjective sensation of warmth perceived by the subject of the experiment and observation. Observations, however, of later date have led some experimenters to a diametri-

cally opposite conclusion—i. e., that the ingestion of alcohol into the economy is conducive to a reduction of the bodily temperature. Many of these experiments have been made upon inferior animals; and to these too much authority must not be given, for it is of common experience in experiments upon small animals to have a marked reduction of temperature consequent upon trifling influences, and in a majority of these cases direct proof of the causation of the phenomena observed by the alcohol swallowed is wanting. In addition to this, the relative quantity of alcohol employed is so large, that while the result may be of use as demonstrating the influence of alcohol upon the bodily temperature, it can not be applied to solving the question as to the use of alcoholic stimulants in the treatment of disease, where small quantities are to be administered through long spaces of time.

For these reasons Dr. Riegel disregards the results obtained from experiments upon the lower animals, and confines his attention to the data of those experiments which have been made upon men, both healthy and diseased.

He deals only with the more important modern researches upon the subject, and with those only which have been conducted with special reference to the alteration in temperature, inasmuch as he has to do, not with the special indications for the administration of alcohol, but only with its effect upon the bodily warmth.

Todd and his followers were the first among modern writers who strongly advocated the administration of alcohol in febrile and inflammatory affections. While his doctrines found many advocates in England, America, and France, in Germany they were received with a less degree of favor, due partially to the small number of experiments made to establish their truth or falsity, partly also to the variety of results reached by observers. In all the recent observations a great discrepancy of results is noticed, being, no doubt, partly due to a want of accuracy and frequency in examining and recording the variations of temperature.

The principal object of Dr. Riegel's own investigations has been to note the variations of temperature consequent upon the administration of alcohol in healthy individuals, as well as in those in all stages of fevers and in convalescence. He considers that the effect of the administration of alcohol upon the temperature is the most certain criterion as to the propriety of its use in the treatment of fevers, and if, as some recent investigators have asserted, this is constantly followed by an elevation of the heat of the body, its use can only be justified in the treatment of patients in a state of collapse, or of those who have been previously habituated to its employment. If an elevation of temperature consequent upon the use of alcohol can not be proven, there is nothing from this view of the case to contra-indicate its use, for it is only rational to endeavor by its timely employment to husband the forces of the economy. The argument in favor of its use becomes much stronger if it can be demonstrated that it has the power to produce a diminution of temperature, and that this power is increased by an increase in the amount administered.

Dr. Riegel's experiments number eighty-six, and in each case comparisons were made with the normal temperature of the same individual. The thermometer in many cases was introduced into the rectum as well as the axilla; and from the discrepancies sometimes observed, the former locality is regarded as the preferable one for observations of this nature. In a majority of cases white or red wine was employed; in some, alcohol diluted to a greater or less degree. From the observations made under the above conditions upon the first class of cases—convalescents—the following conclusions were drawn: 1. Alcohol, even in moderate doses, in many cases causes a lowering of the temperature of the body. The amount of this diminution averages, as a rule, only some tenths of one degree. 2. Only exceptionally is there noticed an elevation of the temperature consequent upon the administration of alcohol; not infrequently, at least after minute doses, there is no noticeable change. 3. The diminution of temperature in convalescents

is, as a rule, less than in healthy subjects, or it may be altogether wanting. 4. In those who habitually drink alcoholic stimulants the depressing influence of alcohol upon the temperature is almost always wanting. 5. The frequent repetition of the doses of alcohol diminishes their lowering effect upon the temperature. 6. The amount of diminution of temperature is directly proportioned to the dose of alcohol given. 7. The depression of temperature caused by alcohol is, for the most part, of but short duration, and the temperature soon returns to its previous grade.

These experiments, then, show that the administration of alcohol to convalescents and healthy subjects, if followed by any change in temperature, gives rise to a diminution in the bodily heat, but they do not justify the conclusion, that a like result follows its use in febrile cases. To ascertain the effect of alcohol upon cases of this class, experiments were made upon patients suffering from acute articular rheumatism, typhus, erysipelas, etc., and the conclusions reached do not agree with those previously stated.

In conclusion, Dr. Riegel states that the influence of alcohol, given in moderate doses, upon the temperature both in febrile and non-febrile states, is comparatively insignificant, but if any change is produced, it is more common to have the temperature lowered than elevated. But, although alcohol can not be looked upon as possessing anti-febrile powers, yet the proof that its administration does not cause any important change in the heat of the body presents us with a strong argument in favor of its use to prevent the too rapid waste of tissue in febrile affections.

The dangerous elevation of temperature must be combated by the use of cold and the other means at our command. Alcohol meets the second indication, to prevent waste of tissue and favor reparative action.—*Med. Times.*

ART. IX.—GOOD NEWS FOR FEVER AND AGUE REGIONS—THE EUCALYPTUS TREE—A TREE THAT DESTROYS MALARIA.

At the last meeting of the French Academy of Science a very interesting paper was read by M. Gambert. Its subject was the alleged febrifuge properties of the Australian tree, eucalyptus globulus, which is said to have the curious and valuable power of destroying the malarious element in any atmosphere where it grows. The species in question is one of that family indigenous to New South Wales, which the colonists call gum-trees. They shoot up very quickly, and to an enormous height, some of them reaching 150 feet, with a girth of from 25 to 40 feet. The sparse and strangely-twisted foliage grows in a thin crown at the top of the pillar-like stem, but the characteristic of the whole genus is the rapid amount of increase, seen equally in the "iron-bark," the "blue gum," and this particular specimen, the eucalyptus globulus. The tree in question absorbs an immense deal of water from the earth, and at the same time emits an aromatic odor, which has, perhaps, something to do with the beneficial influence attributed to it. Where it is thickly planted in marshy tracts the subsoil is said to be drained in a little while, as though by extensive piping. Miasma cease, we are told, wherever the eucalyptus flourishes. It has been tried for this purpose at the Cape, and within two or three years has completely changed the climatic condition of the unhealthy ports of that colony. Somewhat later its planting was undertaken on a large scale in various parts of Algeria, situated on the banks of a river, and noted for its extremely pestilential air; about 13,000 eucalypti were planted. In the same year, at the time when the fever season used to set in, not a single case occurred, yet the trees were not more than nine feet high. Since then, complete immunity from fever has been maintained. In the neighborhood of Constantina, it is also stated, was another noted fever spot, covered with marsh-water both in winter and summer. In five years the whole ground was dried up by 14,000 of these trees, and farmers and children enjoy excellent health. Throughout Cuba marsh diseases

are fast disappearing from all the unhealthy districts where this tree has been introduced. A station-house, again, at one end of a railway viaduct, in the Department of the Var, was so pestilential that the officials could not be kept there longer than a year; forty of the trees were planted, and it is now as healthy as any other place on the line. Such are some of the facts brought forward by M. Gambert. If they are well established, it would be most desirable to try whether the eucalyptus would thrive on the west coast of Africa and other malarial districts of the warmer latitudes. It is affirmed that the sunflower possesses a similar capacity to dry up the subsoil and neutralize miasma. Nor should botanists neglect these suggestions. There are more wonders yet in the vegetable world than are dreamed of in their philosophy. How passing strange, for example, is that property of the papaw-tree to make meat tender! A joint of mutton steeped in a solution of its juice becomes instantly succulent, and the flesh of animals fed upon its leaves "melts in the mouth" upon cooking.—*London Telegraph.*

NOTE.—Will not the physicians of Washington, D. C., induce the American Agricultural Bureau to investigate this matter?—E. S. G.

ANALYTICAL DEPARTMENT.

"Qui e nuce nucleum esse vult, frangit nucem."—PLAUTUS.

ART. I.—DETERMINATION OF THE SEX IN UTERO. By C. T. DEANE, M. D., Professor of Diseases of Women and Children, University of California.

It has been asserted in various periodicals during the past ten years, that the sex of the child may be determined before birth by auscultation of the fœtal heart. It is a theory that, like many others, has gained a sort of foolish and tacit recognition among professional men, although I have nowhere been able to find any tabulated statistics to demonstrate its correctness.

I was prompted to experiment in this matter some time since by reading an article in the "Western Lancet" positively asserting that the sex could be discovered, claiming as a rule as follows: (I do not give the words of the author, as I have not the article at hand, but simply the gist of it). "It is well known," the writer says, "that the pulse of the sexes differs, that of the female being more frequent than that of the male, consequently the heart of a female fœtus beats more rapidly than the heart of a male." The writer proceeds to lay down the rule, that whenever the number of the pulsations of the fœtal heart exceeds 135 per minute, we may assert that it is a girl, and when below that figure a boy.

With this rule in my mind I commenced my examinations, but, before giving the result, let me say, that it requires a deal of practice to count accurately the fœtal heart-beats; that it is necessary to have perfect quiet in the room; even the proximity of a clock or a watch is liable to distract one from attaining a correct result. To facilitate counting, a third person should hold a watch, signaling when to begin and when to cease. There is generally but little difficulty in locating the fœtal heart after a certain amount of education of the ear; but this previous training is necessary, for after distinguishing perfectly the sound and its exact locality, on attempting to indicate the spot to others, they may be unable to hear anything.

The fœtal heart-sound is usually found in the median line about an inch below the umbilicus, but sometimes you find it very much to the right, and in some rare instances to the left of the median line. It closely resembles the tick of a watch. The patient should be placed on her back, with no covering but the slightest to obstruct the hearing. The ear (in private practice the stethoscope is preferable), should be applied over the region of the uterus, and the sound of the heart searched for. The person holding the watch is informed by a sign when it is found, and he, by the same means, signifies when to commence counting and when to stop. Under all circumstances a full minute should be counted.

From the following table it will be seen that I failed six times out of sixteen to designate correctly the sex. In these six instances the heart-beats were perfectly distinct, and I was most sanguine of a correct decision. We must, therefore, conclude that the assertion "that the sex can be determined *in utero*," is a fallacy, if not an absurdity.

Case...	Age....	Nativity.	Examined.	Heart.	S—Sex	Date of Birth.	Sex....
1	24	Ireland.	August 11.	148	Girl	September 11.	Girl
2	27	"	October 1.	140	"	November 3.	"
3	25	"	October 1.	140	"	November 2.	"
4	27	United States,	November 27.	145	"	December 20.	"
5	31	"	November 28.	120	Boy	January 1.	Boy
6	22	Germany.	November 28.	115	"	December 2.	"
7	30	England.	November 29.	140	Girl	December 22.	"
8	28	United States.	November 29.	125	Boy	December 1.	Girl
9	18	Mexico.	December 17.	137	Girl	January 3.	Boy
10	30	Ireland.	December 17.	120	Boy	December 18.	"
11	30	Germany.	February 28.	132	"	March 11.	"
12	32	Ireland.	March 11.	136	Girl	March 28.	Girl
13	26	United States.	March 2.	138	"	March 28.	Boy
14	33	British America.	May 2.	114	Boy	May 27.	"
15	23	United States.	May 6.	140	Girl	June 18.	"
16	21	"	May 7.	145	"	May 9.	"

When we consider the numerous influences, moral, mental, and physical, that may disturb the circulation of the mother, and as an immediate consequence, diminish or accelerate the action of the child's heart *in utero*, it must be acknowledged that no theory, no matter how ingenious, can be built on so infirm and unscientific a basis. A rule so uncertain, unreliable, and replete with exceptions, is worse than no rule at all, and deserves no status whatever in medical science.— *West. Lancet.*

ART. II.—A NEW METHOD OF PRODUCING LOCAL ANÆSTHESIA.

The interest that has been recently manifested in the Profession on the subject of anæsthetics, induces us to take an early

opportunity of directing our readers to an important paper, by A. Horvath, of Kieff, published in the "Centralblatt feur die Medicinischen Wiessenschaften," proposing a new method of producing local anæsthesia. It is a well-known fact, that if the hand be immersed for a short time in ice-water, an intolerable pain is caused, and the hand has to be withdrawn. In the course of a series of experiments, made in reducing the temperature of frogs by means of cold alcohol, Dr. Horvath observed that no such pain was produced when the hand was immersed in cold alcohol, not even when the temperature of the alcohol was as low as 5° C. Pursuing the experiment still further, glycerine was found to possess a property similar in this respect to alcohol. Ether, on the other hand, caused pain, the same as ice-water, while the pain produced by cold quicksilver was more acute, causing the speedy withdrawal of the finger when plunged into this liquid at a temperature of 3°. It was next ascertained that, when the finger was held for quite a long time in alcohol having a temperature of 5° C., no pain whatever was experienced, and what was a still more remarkable phenomenon, although the faintest touch was distinctly perceived by this finger, yet no pain whatever was experienced from sharp pricks, which in other fingers were sufficient to cause considerable pain. This experiment seemed to show that the application of cold alcohol has the effect of depriving the part of the special sensibility to pain, without, however, impairing the delicacy of the general tactile sensation, which, as is well known, resides in the superficial integument. This apparent possibility of the artificial separation of these two nervous functions—viz., the tactile sensation, and the sensation of pain, and the temporary suspension of the latter, seemed important in a physiological point of view, and also of no small practical utility to allaying certain forms of local pain, more especially that caused by burns, and surgical operations. With regard to burns, Dr. Horvath soon had an opportunity of testing the value of this application on his own person, as well as upon others, and with the most satisfactory results. Not only was

all pain instantly allayed, directly the part was immersed in alcohol, but it was found that the wound very speedily began to assume a more healthy appearance, the surrounding redness rapidly failing. The process of healing seemed also to be accelerated. If that theory is a correct one which ascribes the frequent fatal termination of burns to the result of the constitutional shock induced by the severity of the pain, in that case the application of cold alcohol, in that it affords the patient an immediate relief from his sufferings, will prove a powerful agent in such accidents in saving life. In like manner, this same application may be found valuable, it is thought, in cases of traumatic tetanus. The method of producing local anæsthesia by the aid of ice, ether, and rhigolene has been perfectly understood for many years. These agents have never been extensively employed, however, inasmuch as it has been found by experience that the process of freezing the part is often productive of quite as serious pain, as would have been experienced from the operation without the administration of any anæsthetic. The ether spray is found to be a source of embarrassment to the operator; for, if not carefully directed, it is liable to take effect upon his own fingers, bringing on a sudden numbness, which is more surprising than gratifying. It can, moreover, be applied to only a limited extent of surface at a time.

The extreme simplicity of this new anæsthetic, the ease with which it can be applied to any part of the body where pain is experienced, or when it is desired to make an incision—all these circumstances tend to make it highly probable that its employment will ultimately become general, thereby doing away, in a great measure, with the disagreeable and dangerous effects of ether and chloroform.—*Boston. Med. and Surg. Jour.*

ART. III.—ON THE TREATMENT OF ULCERS OF THE LEG BY CIRCUMCISION. By E. T. BRUEN, M. D., Resident Physcian, Philadelphia Hospital.

In the issue of the "Medical Times" for June, 1873, an article appeared, taken from a German journal, stating that chronic, extensive, and otherwise intractable leg-ulcers had been successfully treated by an incision around the circumference of the ulcer down to the deep fascia. If care was taken to prevent union of the cut surfaces, a rapid cure was effected under the use of a simple water-dressing. Two cases were treated in the surgical wards of the Philadelphia Hospital during the past summer; and, thinking that the results might interest some, I shall give their history, as follows. Their perusal will probably indicate why further trial of circumcision was not made.

Charles Garton, aged sixty-one, admitted to the hospital January 21, 1873. He had a small ulcer situated on the anterior and outer surface of the leg, midway between the ankle and the knee. He was treated with various dressings, but without success, until last June, when it was determined to try circumcision. This was accordingly practiced about the 1st of June by my predecessor, with the following results: The tissue included between the line of incision and the ulcer immediately commenced to slough, so that in a few days the ulcer was enlarged about one inch all around; but the mischief did not stop here, for the ulcer continued gradually to spread, in spite of every application which could be suggested. The surface was twice brominized, but, notwithstanding, an abscess formed in the tissues over the ankle-joint, while the man's general health rapidly declined. Another abscess formed in the upper third of the leg, dissecting between the muscles; a third was formed in the calf, and death from septicæmia and exhaustion was feared. Under nourishing diet and suitable treatment, he gradually recovered his usual health; but before the spread of the ulcer was checked, it extended nine inches longitudinally, and five inches, or nearly around the limb, transversely. The surface has been slowly healing for the past eight weeks, and is now almost en-

tirely well; but it occupied three months to restore him to the condition he was in before the trifling operation.

The other case was in a man—Robert McCauley, aged sixty—admitted to the hospital during the month of March, 1873. He had a small ulcer situated in the calf, in the middle third of the leg. He had suffered from it for at least fifteen years, but it had been entirely healed several times during that period. An incision about one and a half inches from the margin of the ulcer was carried around it. The tissue speedily sloughed, and the ulcer gradually increased in depth and extent; finally, an imperfectly-nourished, callous cicatrix formed over a portion of the surface, and the ulcer remained more intractable than before. After many fruitless attempts to heal it, the man was etherized, and the hardened callous tissue was removed, the entire surface being afterwards cauterized. The resulting ulcer is at present about five inches in diameter, the same extent longitudinally, and is now showing a tendency to cicatrization; but the man states that it is larger than it has ever been previously.

It does not appear to me that cell-change is sufficiently active, nor is the vitality of chronic leg-ulcers of such a character as to justify the danger of enlarging the pathological surface when the morbid conditions can be treated by numerous other measures not open to such objections. The subject is so trite that I should not have ventured to report these cases had I not been aware that the method of treatment has been somewhat discussed. It is proper to add that both these cases seemed favorable for a fair trial of this new mode of treatment, as both men enjoyed excellent health.—*Med. Times.*

NOTE.—Were their ages such as to render the test of this method entirely fair?—E. S. G.

ART. IV.—MEDICAL EDUCATION. By EDWARD RICHARDSON, M. D., of Louisville, Ky.

In his able and beautiful address on this subject, delivered before the Kentucky State Medical Society at its last meeting, Dr. Richardson exposed the dangerous and popular fallacy, that thorough education is not essential to the successful physician. Where distinction had been attained by the uncultivated, he showed how vastly greater such eminence would have been had the education of the representative of such eminence been unneglected. In this connection he introduced, with great appositeness and strength, this beautiful and classic illustration:

"It is related of Milton, who in his youth is said to have been extremely handsome, that as he was one day reclining, with a book in his hand, beneath the shade of a tree in the University Grounds, he gradually sank into slumber. At this moment, a party of foreigners, who were walking through the grounds, drew near, and paused to admire the sleeper. A young lady of the company, after gazing on him for a time in delighted wonder, hastily wrote a few lines upon a bit of paper, and slipping it into his hand, passed on with her companions. One of Milton's comrades, who had witnessed the scene from a distance, coming up, apprised him of what had occurred, extolling in the highest terms the personal beauty of the unknown foreigner. Milton, with trembling fingers, opened the billet, and found it to contain a few lines from an Italian poet, beginning: 'Ocche stilli mortalli,' etc. 'Ye eyes! Ye human stars! If such be your influence when closed, how great would be your power if ye were open!' It is said that Milton was in despair at being unable to trace his unknown visitant, and that journeying in vain, even into Italy, for the purpose, his failure finally suggested to him the title of his immortal poem, 'Paradise Lost.'

"It does not seem to have occurred to those who decry thorough education as a prerequisite to the study of medicine, that the exceptional cases on which they rely, however worthy of commendation, would have been far more brilliant, eminent,

and successful had the eyes of these men been opened to the light of a thorough education; and that for the want of this, many a mute, inglorious Milton, in every department of human life, may have had occasion to mourn through sorrowful years his 'paradise lost.'"

ART. V.—THE COMPARATIVE MORTALITY OF SURGICAL OPERATIONS IN HOSPITAL AND PRIVATE PRACTICE. By MR. ERICHSEN, London.

In his recent lecture in London, Mr. Erichsen quoted Simpson's statistics as follows:

"Without going into details, which would here be alike unnecessary and tedious, it may be stated broadly that, having collected a large and nearly equal mass of statistical returns of consecutive operations performed in large and small hospitals, in country, mining, and private practice, he found that of 2,089 cases of amputations in large hospitals in this country, 855, or 1 in 2.4, had died; whilst of 2,098 in country and private practice the deaths were only 226, or at the rate of 1 in 9.2.

"It is quite possible that Simpson's figures may not be absolutely, but only approximately, correct, and that certain sources of fallacy have introduced themselves into his tables. But, making all reasonable allowance for every possible source of error, the difference is so great between the operations of amputation in and out of hospital, that the material result can not be affected—viz., that a mortality of 1 in 2.4, or, in other words, of more than 40 per cent., is not a necessary result of amputations; that it is greatly the result of the circumstances in which the patient is placed after the operation; and that it may be materially reduced—according to Simpson, by nearly three-fourths—so as to amount to less than 12 per cent., by an alteration of these circumstances; and that the mortality so dependent on circumstances which admit of alteration, of modification,

and probably of rectification, is certainly equal to that which exceeds 1 in 9, or 12 per cent.

"But, when we come to analyze these results more closely, some startling facts are elicited. Thus, amputation through the forearm can not surgically be considered a very serious operation. It is not likely to prove fatal by any conditions dependent on or inherent in it—as, for instance, by shock or hæmorrhage—but can only become fatal by the intrusion of other and adventitious circumstances dependent on causes existing outside of the operation itself. Well, what is the result? That of the 877 cases occurring in private and country practice only 2 died, while of 244 in hospitals no less than 40 died, being 1 in 188 against 1 in 6.

"Surely, here is a condition of things most unsatisfactory in itself, and not very creditable to modern surgery, and one in which we may hope that the further cultivation of the science may do much to aid the progress of the art of surgery."

"Accepting thus sincerely Simpson's figures as unimpeachable, it is not surprising that Mr. Erichsen should ask: 'Must hospital surgeons ever remain content in losing from one-third to one-half of all their amputations, and nine-tenths of some?' or that, addressing the students, he should say to them: 'Here, then, is a vast and most fertile field, to which you who are commencing your studies may direct your attention with the greatest advantage, and which you who after this session will go forth into the world to practice may cultivate with a double advantage to humanity and to yourselves.'"—*Med. Times.*

ART. VI.—MODIFICATION OF THE OPERATION FOR HAIR-LIP. By SIR WILLIAM FERGUSSON, London, Eng.

On two successive Saturdays, Sir William Fergusson has recently demonstrated to the students of King's College a novel modification of the ordinary operation for hair-lip. The cases

in which he carried out this plan were of the usual type, the fissure being, as in the majority of instances, on the left side; and in both it was considered advisable to take away the intermaxillary bone. This adds to the success of the operation, not only by removing an occasional obstacle to primary union, but because the teeth, which are subsequently developed from the projecting knob, are worse than useless, by reason of their deficient development and faulty position. Instead, however, of removing the portion of bone readily with the knife or bone forceps, it had occurred to Sir William that it would be much better to operate subcutaneously, so to speak, by stripping off and retaining the mucous membrane; and accordingly this was done with perfect success, the bone shelling out readily from its investment. Not only will this procedure greatly accelerate the subsequent process of healing, but the advantage is obvious of retaining a thick and firm mucous surface in preference to the more artificial substitute of cicatricial tissue.—*British Medical Journal.*

ART. VII.—TWO CASES OF CYSTICERCUS CELLULOSUS IN THE HUMAN EYE. By DR. J. HIRSCHBERG, of Berlin. Virchow's Archives, vol. liv., Parts 1 and 2.

In one case the worm was in the deep portion of the vitreous humor; in the other, it was in the anterior chamber of the eye. After the worm had been detected by means of the ophthalmoscope, an incision was made in the sclerotic, as for the extraction of a cataract; then iridectomy was performed, and the crystalline lens slowly and completely extracted while the patient was still in the horizontal position.

The upright position was then assumed, and a small hook was inserted into the vitreous body, and the entozoon dragged forward until it was visible to the unaided eye. By causing the patient to bend forward, the edges of the sclerotic wound

were made to gape, and the worm slipped out upon the table. The wound healed by first intention, and the form of the eyeball has been completely retained.

The second case is important, since it demonstrates that the position of the parasite may be mistaken for one of the lamellæ of the cornea, when in reality it is in the anterior chamber of the eye. Both parasite and patient were very young; the former about twelve weeks, and the latter two years. An incision was made in the inferior portion of the cornea, and the cysticercus extracted head-foremost. Under gentle pressure and instillation of atropine the wound healed in two days, and the sight remains normal.

CLINICAL RECORDS.

"Ex principiis, nascitur probabilitas: ex factis, vero veritas."

ART. I.—PUERPERAL CONVULSIONS TREATED BY BLOOD-LETTING. By JNO. HERBERT CLAIBORNE, A. M., M. D., Petersburg, Va.

CASE I.—July 17th, 185–; Mrs. H., stout, large woman, and plethoric to a degree not often seen. The blood seems threatening to break out of the superficial vessels. It is full term; second labor; oldest child four years old. There is quite an intelligent midwife with her, who says that labor has not set in; that Mrs. H. has been suffering with headache all day; that, at 4 P. M., she was taken with blindness, when she (the midwife), on her own responsibility, opened a vein and bled her sixteen ounces. Before the blood ceased to flow, and whilst she was uncording the arm, a convulsion occurred, when I was at once summoned. Her face was scarlet, eyes red and injected, pulse 80, full and corded. She was delirious and restless; kept in the bed with difficulty; complains in her moan-

ings and ravings of headache, and does not seem to see at all. I at once reöpened the vein and took twenty-four ounces of blood, ordered an evaporating lotion to the head, and an enema of one ounce of spirits of turpentine to be thrown into the rectum. At 4 P. M., she had another convulsion, and Dr. R. L. Madison saw her with me. At 5 P. M., another. On examination, no signs of labor. The woman is quiet, but totally unconscious. We determined to await results without further treatment. At 9 o'clock she had another violent convulsion, from which there was strong reäction, and pulse rising. We again opened a vein and took thirty-two ounces, with marked good effect. She had no further convulsion before 11 P. M.; two hours interval from the last. It was not so violent, however, nor did it last so long. I remained with her during the night. She rested pretty quietly, and had only two slight convulsions, after the last of which I placed two wet cups on the nucha.

July 18, 9 *A. M.*—She has had two very violent convulsions in the last two hours. Drs. John F. Peebles and R. L. Madison both saw her with me. Os now about the size of a silver dollar, but rigid and resisting; head coming down; face flushed; pulse 100, hard and full. One would not suppose she had lost a drop of blood. Ordered, on consultation, venæsection, forty ounces, and an enema containing thirty grains of assafœtida and thirty drops of wine of opium. 11 o'clock A. M., patient has had no convulsion since we saw her. She is unconscious but quiet, and labor is progressing slowly. Decided not to interfere. 3 o'clock P. M., after several frightful convulsions in quick succession, she has just been rapidly and naturally delivered of a living child. 5 o'clock P. M., still unconscious and breathing badly; face flushed, and pulse rising. Ordered two cups to the temples, followed by sixteen American leeches. 7 o'clock, another convulsion; no change. 9 o'clock, another; pulse now 120, softer; face lost its extreme flush; lochia commenced to flow for the first time. Ordered—

℞.—Assafœtidæ, grs. xxx.;
Mosch., grs. vj.;
Morphiæ, grs. ss.,

by enema.

July 19, 9 *A. M.*—The patient has had no convulsion since last prescription, and is, to some extent, conscious this morning; has swallowed half a cup of coffee; she is very restless though, and the face has flushed again; pulse 110, hard and quick. Ordered six American leeches to each temple, and ten grains of calomel to be placed on her tongue, to be followed in six hours with one ounce of castor oil as an enema.

July 20, 9 *A. M.*—The medicine has operated well, consciousness has returned, and the patient complains now only of weakness and soreness, with fluttering about the heart. She is still stone blind; no evidence of anæmia; temporals corded and throbbing. Ordered the leeching to be repeated, and cold applications to the head. In addition, one-sixth of a grain of morphia and one-eighth of a grain of tartrate of antimony every three hours until she rests quietly.

July 21.—After three or four doses of the opiate, the nurse reports that Mrs. H. slept well, and the medicine was discontinued. She seems quite bright and well this morning. Ordered chicken-water and toast.

Her recovery was now rapid and without accident.

It will be seen that from *venæsection* my patient lost *one hundred and twelve* (112) *ounces* of blood in forty-eight hours. Adding the amount taken by leeches and cups, and the probable amount lost in the natural discharges of parturition, I suppose she could not have lost during labor and subsequently less than *one hundred and forty ounces.* This practice seems to border on the heroic. Hands will be lifted in holy horror, no doubt, at the reckless audacity—some may write it, criminal audacity—with which the lancet was used. Nineteen years have elapsed since this case was put on record. Time may palliate the offence with some; but I do not offer it as an apology, nor do I put up any defence for the treatment. If success were

the test of merit always, I could point to the recovery of my patient as the proof of the correctness of the practice. But as that is not invariably so, I wish to write that now, to-day, claiming to live in the full light that has flooded physic under the new régime, and after the experience of so many years, I see nothing which would make me abate one jot of confidence I placed in the correctness of the treatment of the case then. I know of nothing which I did then which I would not now do. I know of nothing which I omitted then which I would not omit now, under similar circumstances, with this exception; that in a like case now I would administer chloroform after free depletion, and resort to the use of forceps or turning at the earliest practicable minute. I regarded blood-letting as the sheet-anchor in the treatment of puerperal convulsions then, and I regard it as the sheet-anchor in the treatment of puerperal convulsions now. Of course I would conjoin it now, as I did then, with opiates and antispasmodics, and I would conjoin it now with chloroform, both on account of its anodyne or anæsthetic power and its relaxing effects upon the muscular fibres of the neck of the womb, and upon the muscular system generally.

I do not believe that venæsection will CURE puerperal convulsions; but by reducing the amount of blood circulating in the body, it prevents the fatal effusion upon the brain, which would otherwise occur in the obstruction that ensues on the spasmodic contraction of the muscles, especially of the cervical muscles. Of course I would not bleed every patient one hundred and forty ounces.

I never saw a patient besides Mrs. H. that I thought would bear this amount of depletion—shall probably never see another that will bear so much—but should I do so, I shall surely resort to the same remedy in the same heroic doses, and no doubt shall have as little cause to regret my wanton waste of the fluid of life. I have, unfortunately, in the course of my practice had many, very many cases of this most frightful malady to combat; and I regret that I can not record results so favor-

able in all, but I can honestly say that I have never yet seen a woman die of eclampsia during parturition where the lancet was used early, freely, and efficiently.

In all of the fatal cases there was either protracted or neglected albuminuria, or irreparable damage had been done before full bleeding had been resorted to, or I have been overruled in consultation by men whose minds were imbued with the principles of the do-nothing or the restorative practice.

In the following case (occurring nineteen years later) the same line of treatment was pursued, though less actively:

CASE II.—April 16, 187–; Mrs. T., aged thirty-four; mother of seven children; is at full term now with another; has been suffering very much for weeks with "swellings of the hands and feet and inability to lie down." She has been taking, on prescription of a physician, an infusion of juniper berries and cream of tartar. Bowels have been kept open by this medicine and kidneys been freely acted upon—urine never been examined. Her appetite is good, and has been very freely indulged. She is in bed but has no pain; is sitting up in bed, and says there is nothing the matter but "blindness"; says she "has not seen any one for two hours." Her head is cool and pleasant; skin soft; pulse 140, full and quick. Her friends whisper that "she had a sort of spasm about an hour ago, and don't know when they put her to bed."

Venæsection thirty-two ounces.

℞.—Hyd. Mit. Chlor., grs. xij.;
Pulv. Doveri, grs. iv.;
Sodæ Bi-Carb., grs. ij. M.

at once. This at 11 o'clock A. M. At 1 o'clock P. M. I was summoned in haste. "Mrs. T. had had a fit at 12 o'clock, and been unconscious ever since." There was the characteristic stertor; hissing expiration of eclampsia; face and lips livid; pulse fuller than when I saw her.

Venæsection thirty-two ounces. Six foreign leeches to the temples and an enema of turpentine soapsuds. On examination, no sign of labor. 4 P. M., has had no convulsions since I

saw her; pulse softer and smaller; face pale; is exceedingly restless and nervous in her unconsciousness, and tossing to and fro. Probably has feeble pains. She will bear no further depletion, and there is too much stertor for chloroform. Ordered twenty grains bromide potash every hour until she is more quiet. On examination, the os uteri barely dilating, though there is some show on the index finger when withdrawn. Eight P. M., has had four convulsions in the last four hours. Patient totally unconscious; very restless; face livid, and pulse 150; small but wiry. No progress in labor. Called Dr. H. G. Leigh. We concluded to give eight drops of tincture veratrum viride every hour until the pulse was brought down, and to remain by her so as to deliver as soon as the womb should open.

Eleven P. M., been more comfortable; taken the veratrum viride and the bromide of potash regularly to this hour, but has just had another convulsion, from which she rallied with the greatest difficulty. Under the severity of the nervous shock the functions of respiration and circulation were both entirely suspended, and for more than two minutes there was neither pulse nor breathing. Her friends left the room, saying she was "dead," in which opinion we concurred. Artificial respiration after the mode advised by Marshall Hall was resorted to, however, and in a short time she gasped, then took a full inspiration, and in a few minutes, with the exception of more stertor, was breathing as well as she had done for two hours. Believing that another convulsion would be fatal, and that the only hope of preventing its recurrence was in emptying the womb of its contents, we determined to attempt dilation of the os by artificial means, and to deliver as soon as possible. I found, on examination, that I could get the points of three fingers into the os, and by using these as a cone, I succeeded, after fifteen minutes of steady pressure, in so enlarging it that with some little effort the hand could be introduced within the womb. Dr. Leigh then relieved me, and pushing aside the head, which was presenting, brought down the feet, effecting safe and rapid delivery.

The patient now being totally unconscious, and exceedingly restless and unmanageable, I injected half a grain of morphine under the skin of the forearm. She immediately fell into a quiet sleep, and had only one more slight convulsion about two hours after delivery. In eight hours after delivery she was quiet, though still unconscious, and would take whatever was offered her. A cup of beef tea was given her, and the subsequent, treatment consisted in the administration of suitable nourishment. The pulse, however, kept up to 125, and occasionally 150 for several days, requiring the irregular exhibition of Norwood's Tincture, and as indications arose and returning restlessness, infrequent doses of morphia or bromide of potash. Not until the third day did she exhibit any signs of intelligent consciousness, nor for five days was she aware that her child had been born.

Her final recovery was good.

The cases thus recorded and taken from notes kept for many years past, are representative, not unfair, I think, of all the cases of eclampsia which have come under my observation during twenty years of practice. Unfortunately it has been my lot to have witnessed, I believe, more than my share of this peculiar complication in obstetrical experience, and whilst I can not claim with Chailly-Honore to have saved eighteen out of nineteen cases treated with chloroform and without venæsection (reported in 1859), or with Professor Baum, of Vienna, to have saved all of sixteen cases treated with chloroform, I must be permitted to doubt whether any other physician than he can show the same fortuitous results in the same number of cases, or whether the same gentleman will ever again, with or without chloroform, meet with the same unwonted success. I claim to have saved sixteen cases out of twenty, or rather I report from my notes sixteen cases out of twenty which recovered under my treatment, *post hoc vel propter hoc*, in all of which cases venæsection was practiced, and in many of which chloroform was administered. And I am ready to admit, and desirous of saying, that as an adjuvant of venæsection, it has been

in my hands an invaluable resource; but neither clinical reports from hospitals nor the new and changed pathology in reference to the condition of the brain in convulsive diseases have been able to shake my faith in venæsection, or made me willing to set it aside for any other treatment.

I am not unaware that Brown-Séquard and other most eminent physiologists hold that the state of the brain in epileptic convulsions is a state of anæmia, and that the great nervous centres of animals subjected to experiment become pale, instead of red, at the commencement of an attack of convulsions; and I have seen women and soldiers dying suddenly of hæmorrhage exhibit the most fearful convulsions as the last of the life blood was gushing *pleno rivo* from the broken vessels, and I deduced the conclusion that opposite pathological conditions of the brain, when extreme in their character, exhibit symptoms not at all dissimilar. For, had I not seen in the eclampsia of the lying-in chamber the same convulsive throes, when the suffused face, the swollen jugulars, and the temporals corded almost to bursting, proclaimed that there was no lack of blood in the brain?

But to whom do we look for convulsions during labor in our obstetrical practice? To the patients who are pale, anæmic, and bloodless? To the patients who, in the words of Dr. Hughlings Jackson, "show that the nerve tissue is enfeebled?" For what class of patients do we fear that terrible complication, puerperal convulsions? Certainly not for the class enumerated, but for the robust, the plethoric, the red-blooded, and the "full of habit." And what class of patients, in the experience of all people, learned and unlearned, professional and unprofessional, are usually the subjects of puerperal convulsions? Who fear it for themselves? And for whom do careful and loving friends fear it? Truly, these are some questions which common sense can answer as well as science.

I would be the last, certainly, to depreciate the labors of the specialist in pathology, or to discredit the infinite services of the scalpel of the vivisectionist, seeking to lay bare the mys-

teries of life; and I would accredit all honor to the men who patiently, and faithfully, and honestly seek to exalt into the accuracy of a science the crude offices of an art for so many years empiric; but from the earliest ages, comparative anatomy has misled the student of medicine, and I, for one, am unwilling to base my pathology of eclampsia upon the appearances of the brain of a pigeon which has just perished of fits, or that of a guinea pig which has been persecuted into convulsions. The seat of the malady of the eclampsia of the gravid woman is not centric, but eccentric; the irritation is reflex; but in our experience, the cephalic disturbance has never been developed, except in a patient plethoric and full of habit, and whose brain has been fired with the unwonted stimulus of rich, fibrous, or albuminous blood, so common to the parturient state. The first indication with us has always been to relieve the brain of this unusual and oppressive load as soon as possible; the second, to allay the reflex irritation with opium or chloroform; and the third, to remove it as soon as practicable by emptying the womb of its contents. The first indication is especially urgent, if there be suspicion of abuminuria. I say suspicion, because the cases of eclampsia to which we are generally called have occurred suddenly and without previous attention, and no time is afforded usually to confirm the diagnosis of such complication.

ORIGINAL CORRESPONDENCE.

"Sit mihi Fas scribere audita."

NEW ORLEANS, January 20, 1874.

Dr. E. S. Gaillard:

Dear Sir,—In the November (No. 3) number of the "New Orleans Medical and Surgical Journal," I find an article from Dr. Perry, one of the Sanitary Inspectors of the New Orleans

Board of Health, entitled "Yellow Fever and the Results of Disinfection in New Orleans."

The ensuing paragraph explains the true origin of this article:

"One physician (alluding to myself in connection with carbolic acid disinfection) has condemned it in the public prints, and his evidence is that he had a case, and after being sick four days, the pure* carbolic acid was sprinkled in the yard, and and the man died the following night. From this experience, carbolic acid has been condemned as being hurtful. It has also been asserted that the yellow fever appearing in the Fourth District during three successive years, when disinfection was applied, shows that disinfection did no good."

It has pleased the Sanitary Inspector to pass over much that I did say, and to refer to a case not yet presented by me; but which it is my present purpose to offer in somewhat more pointed detail than he has chosen to employ. The sole object of this paper is to present the facts as they exist; in one word, "to nothing extenuate nor set down aught in malice," and to leave my readers to form their own just conclusions. In lieu of abbreviating his statements out of all intelligent comprehension, it shall please me to quote him fully and fairly. I find it necessary, in the first place, to supply a very grave and singular omission on his part, and which, indeed, possesses more than ordinary interest and bearing on the past year's disinfection.

I will cover this oversight of his by recording here the following official letter, under date of the 12th of October, 1873, addressed to "S. C. Russel, M. D., Secretary of Board of Health," of this city, from the quarantine physician, stationed near the mouth of the Mississippi river. I give it in full:

"Dear Sir,—Your official communication of the 9th instant, requesting particulars concerning bark Valparaiso, is at hand

* The Board of Health has constantly employed the impure article, and made no exception in my case. The other is too expensive, and, if anything, less promising.

and contents noted. The bark Valparaiso, Spanish flag, left Havana on the morning of the 15th of June, 1873, for New Orleans, with nineteen crew, and five sailors who worked their passage here. Arrived at Quarentine Station June 24, P. M., all well. Notified Captain Roses that two and a half day's quarantine were required to complete the ten days required by law. She did not get off until seventy-two hours after her arrival, the towboat being detained below. She was visited three times daily by myself, and I saw her officers and crew on each visit. She was purified with chlorine twice, both in forecastle and between decks. Carbolic acid was used twice, freely in pumps, and scattered below, as also in the forecastle; being in full ballast, it was easy to distribute the acid freely and thoroughly. From 6 P. M. until morning, during her stay here, the hatches were removed in order that the cool might replace the warm air of the holes of the vessel. The officers' cabin was twice fumigated, much to their disgust, and during the entire day they did not go inside. The officers and crew were in perfect health up to the time of sailing from here. The above are all the particulars concerning the bark Valparaiso.

"Yours, very respectfully,

"GEORGE HOWE, M. D., Resident Physician."

I shall now introduce Dr. Perry's evidence, which must be considered as official in character: "The yellow fever of 1873 commenced in this city on July 4th, in the person of J. M. Arran, the mate of the Spanish bark Valparaiso, which left Havana in ballast June 16th, arrived at the Quarantine Station below the city June 24th; after a detention of two days, the vessel arrived in this city, and was moored at post 48, at the foot of Second street. The man died July 8th, with well-marked yellow fever. On July 12th, the mate of a steamboat, which was laid up for repairs at the same wharf, about thirty yards distant, was attacked with yellow fever and died. From these two cases the disease slowly spread, there being six cases in July and twenty-four in August. Of the first ten cases,

eight had recent and direct communication with the first two cases, or had visited the vessels above-mentioned."

Again, he remarks: "In the square bounded by Rousseau, First, Soraparu, and Fulton streets, from August 14th to September 8th, there were six cases. The whole square was disinfected September 13th, and there has been no subsequent cases."

Mark well! six cases offer on this square between the dates mentioned, and finally, after an intervention of five days, and no new cases presenting, carbolic-acid disinfection is resorted to with the assumed belief that it here arrested the disease.

I submit another quotation of the same character: "In the square bounded by Chippewa, Annunciation, Eighth, and Ninth streets, there were, from September 10th to 16th, three cases of yellow fever. The half square was disinfected September 20th. No subsequent cases have occurred in this square," etc.

Three cases are permitted to present themselves without carbolic-acid interference between the dates just given. After an interposition of four days, however, without any additional cases occurring, this is adjudged the opportune moment for the employment of carbolic-acid disinfection, and another assumed victory for carbolic acid is recorded. Surely, the Board of Health must have something stronger to offer us for the expense and nauseating odor of carbolic-acid disinfection than they have thus far published. Yet these two instances are the only ones especially referred to by Dr. Perry. Is he prepared to demonstrate to us that more cases would have occurred upon these squares than did present, had carbolic acid not been employed? The Inspector confesses that cases of yellow fever have occurred, in spite of the "extensive disinfection with carbolic acid of all places where yellow fever had been reported." He accordingly admits that "the total number of these cases, after disinfection, was eleven." The Doctor avers that "the number of cases which occurred before the disinfection of the squares on which they lived was ninety-one." But he tells us that "during the first week in August," the Board of Health commenced this "extensive disinfection" in question. If so,

how did it happen that the square where the six cases occurred from August 14th to September 8th, "was not disinfected until September 13th," and the other square, pointedly referred to by him, where three cases occurred "from September 10th to 16th," was not brought under the carbolic-acid treatment until September 20th? These are certainly interesting as well as legitimate inquiries. He proceeds: "From these two cases the disease slowly spread, there being six cases in July and twenty-four in August." The two cases here alluded to were "J. M. Arran" and "the mate of a steamboat." Where, under these circumstances, as "the disease slowly spread," was the "extensive disinfection" enforced? May it not have been practiced on the squares above named sooner than the dates mentioned by him; "September 13th and September 20th?" I must presume that disinfection was practiced where yellow fever existed, and not in the distant neighborhoods, remote from its invasion. And if these premises be correct, I am unable to perceive where the "extensive disinfection" was carried on, if we are to exclude the above instances from its operation. "To ascertain," he continues, "whether or not the small number of subsequent cases was because of the small number of persons liable to yellow fever who lived in these squares, a census was taken of the total population of each square, and also of the white persons who had come to the city since 1867, the last epidemic year. In thirty squares in which most of the yellow fever cases occurred, the total population was 5,223, an average of 174 per square; of these, 1,249 were liable to take yellow fever, being nearly 24 per cent. liable. Of the persons liable, 73.10 per cent. took the disease before disinfection, and 9.10 of one per cent after disinfection." I have not the opportunity of personally verifying this census, because this community is essentially a moving one. New leases are made every year on October 1st, when neighborhoods and districts are radically changed in the personnel of their occupants. A revision of this census, then, is a clear impossibility. But I must own to my misgivings in a census which yields such flattering in-

crease to our white population since 1867—of "nearly 24 per cent." And this, too, for a district which has labored under a bad reputation for two years, and now three years back. Rents are much cheaper in the second and third districts; in Carrollton and across the river in Algiers, and in Gretna, than in this particular section. It is certainly just and reasonable to infer that it would not have been favored by strangers over and above other portions enjoying better reputations for health; and by health, I mean a greater immunity against yellow fever. If there were an increase of "nearly 24 per cent." of "white persons" "since 1867" here, an even larger increase would naturally be looked for in more fortunate sections of our city. Can any such position be maintained?

To return to Dr. Perry again: "Of 6 cases on July 6th, they were all between Chippewa street and the river. Of 24 cases in August, 21 were between Chippewa street and the river. Of 48 cases in September, 38 were between Chippewa street and the river. Of 31 cases in October, 21 were between Chippewa street and the river." It must be borne in mind, that when the "Infected District" is referred to, we mean the space above given. I will pass the above quotation by with this comment, that notwithstanding the statement or fact, that "nowhere in the world has disinfection on so extensive a scale been used," the disease maintained its chosen battle-field, unterrified and defiant to the last, seizing and carrying off its victims, and, in my judgment, obtaining far more assistance from carbolic-acid disinfection in this last particular, than it ever encountered opposition from it, in its steady and unchecked progress. The Sanitary Inspector affirms that the "disease (referring to the yellow fever at Memphis and Shreveport) was undoubtedly derived from this city."

My case, which I will shortly give to the reader, has secured the following acknowledgment from him: "It may even be admitted, that in a few critical cases of yellow fever where life is wavering in the balance, the use of carbolic acid may cause a fatal issue; but this admission does not at all condemn disinfec-

tion as a hygienic measure. Hygienic measures are not for the sick but for the healthy."

Just here I will extract the following from one of my articles "in the public prints": "I contend, then, that for the past three seasons, yellow fever has so restricted itself to one particular section of this city as to cause it to be known as the 'infected district,' in spite of the free use of carbolic-acid disinfection during those three seasons."

Dr. Perry makes the following reply: "It has also been asserted that the yellow fever appearing in the Fourth District during three successive years, where disinfection was applied, shows that disinfection did no good. The yellow fever of 1871 was principally within three hundred yards of the corner of Magazine and Washington streets. And the yellow fever of 1872 was principally around the corner of Jackson and Magazine streets. In fact, in three successive years, the cases have occupied areas far removed from each other, and which were not disinfected the previous year." I was preparing to prove by unquestionable testimony that Dr. Perry had fallen into a grave error, when he indicted the foregoing lines, but being now in position to correct him by his own statement, recorded in another place, I shall not go further than to quote him again upon this subject. In the January, 1874, number of the "New Orleans Medical and Surgical Journal," page 569, and eighth line from top of the page, I will make the following extract: "If some germs" (alluding to yellow fever germs) "remain over from a previous summer, then the fever (i. e., yellow fever) should occupy about the same neighborhoods for several successive years, which it has actually done in the Fourth District of this city (New Orleans) for the past three years." This last quotation was taken from an article "Read before the American Public Health Association," very recently, and from the pen of Dr. Perry.

I have to thank Dr. Joseph Jones, Professor of Chemistry in the Medical Department of the University of Louisiana, for his permission to introduce here the following histories prom-

ised to him, and which were developed this year in the professional experience of a prominent young physician of this city. And I am no less obliged to the gentleman himself, whose name I withhold, as he has reached no conclusion on the merits or demerits of carbolic-acid disinfection in connection with yellow fever; and, therefore, does not wish to be implicated either pro or con in this issue. I say, I am no less obliged to him for the ensuing statements, which I furnish from memory: At a time when this malady was largely prevailing in his own practice, he was called to attend one of the Fathers, belonging to the Society of the Redemptionists, who had been stricken down with yellow fever. The case was at once removed from the main building and isolated. The Board of Health were immediately notified, and they were prompt in having these premises disinfected. Those connected with the Society, at all liable to contract this disease, were removed to a separate and distinct building. The refectory, and the only exit from these premises, had to be resorted to as usual, and these were situated in the main building. Notwithstanding these precautionary measures, joined to the disinfection, a Brother was seized that same evening, and he, too, was immediately isolated. In a few days another Brother from the isolated quarter also fell sick with this disease, and he, also, was isolated. At this juncture two of the attacked died—a Father and a Brother, and the Board of Health, on ascertaining this fact, practiced another carbolic-acid disinfection on these premises. In the face, however, of this second disinfection, a Father who had continued in the main building, and was considered proof against this distemper, now sickened, and passed through its various stages.

Thus three cases, or, at any rate, two cases, occurred on these premises after the isolation and disinfection practiced. The other experience was derived at the St. Joseph's Asylum. Here three children were entered, at a time when yellow fever had very sensibly declined in this city, and one of these children soon fell sick. Yellow fever being suspected, this case was at once isolated, and disinfection practiced by the Board of Health.

The child growing worse every day, the mother finally removed her to another portion of the city, where she died. No new cases resulted in this instance. It will be remembered, the first isolation and twice-performed disinfection experience was undertaken at a time when yellow fever was at its height—the last, when the disease had almost disappeared from our midst.

I visited the Charity Hospital to-day (November 13, 1873), and was informed that 105 cases of yellow fever had thus far been under treatment in this Institution. Of these, 27 recovered, and 68 died, and 10 remain to be still cared for. An interview with Dr. Smyth, the resident surgeon in charge, elicited the following expression: No disinfection of any kind has been, or is practiced here; 73 per cent. of the yellow fever cases treated in this Institution have terminated fatally, but the disease has manifested no disposition whatever to spread. So far, but two cases of yellow fever have occurred within the Hospital, which comprises an entire square; and one of these had free and constant intercourse with the city. Dr. Smyth was quite emphatic in expressing his contempt for carbolic acid, or any other disinfectant, having in contemplation the expectation of staying the progress of yellow fever, cholera, or any other contagious or infectious disease, by destroying its germs, or otherwise. The following conversation was related to me as having transpired between ex-Mayor Flanders and himself upon this very subject: "Doctor," inquired the Mayor, "has carbolic acid the great virtue which is claimed for it—that it can destroy the germs of yellow fever?" "It will do this," answered the Doctor, "if a case occur on a certain square, and carbolic acid should be applied all around that square, no more cases will offer from that square." "Well," interrupted the Mayor, "if that be the case, the expense of the thing is a matter of small consequence"—"but hold on," pursued the Doctor," hear me through—no more cases will happen on that square, because all who are up and about will desert it." It remains to be said, that Dr. Smyth has for many years held his present position; that he is a physician and surgeon of large experience and de-

served reputation, and lastly, that he is a member of the existing Board of Health. I neglected to state, that Dr. Smyth seriously inquired if I had really met any medical gentleman who had the slightest faith in carbolic-acid disinfection.

Prof. Joseph Jones informs me that he treated about 40 cases of yellow fever, so far, this season, in his wards in the Charity Hospital; that he, accompanied by a number of unacclimated students, made post-mortem examinations in every one of his fatal cases; that during this period, he also treated in the same wards, of all diseases, 180 cases, and that his experience corroborates that of Dr. Smyth; i. e., that the disease showed no disposition to spread, and that none of these many unacclimated persons have thus far suffered an attack, notwithstanding the fact that no disinfectants were employed. This hospital has constantly under treatment a large number of unacclimated patients, as well as a number of resident students from the country and elsewhere. It appears to me that the following deductions may be drawn from what has been presented above, to-wit., that the Valparaiso was thoroughly disinfected first by chlorine, and then with carbolic acid; that according to the Board of Health, the yellow fever this year (1873) originated on the Valparaiso; that, according to the same authority, the bark Valparaiso was the source of infection, not only for this city, but for Memphis, Shreveport, and several other places; that the Valparaiso was moored at post 48, which is in the infected district; and finally, that yellow fever has made its appearance in one particular district of this city for three successive years, in spite of the dangerous and unsparing use of carbolic-acid disinfection.

The official papers furnished by the Board of Health, when placed in intelligent connection, are outspoken in their condemnation of the pretensions still maintained by that Board, that carbolic-acid disinfection has proven a success this year in controlling and circumscribing yellow fever. Was not the bark Valparaiso "thoroughly disinfected; how came it, then, that the first case originated on board of her?" If a vessel can not

be successfully disinfected under the most favorable circumstances, how can this great city, or one of its districts even, be disinfected with better results?

Some physicians of this city make no diagnosis in their cases of yellow fever that promise to recover, because they believe that disinfection with this agent is full of danger to an otherwise manageable patient. Others do not report favorable cases, because it would be dangerous to the patient were he made aware that he had this disease, which the odor of this substance, if it did no worse, would be certain to do, with its disgustingly tell-tale smell. The fatal cases are reported to avoid a fine; but I feel I have a right to say, that there are very many recorded cases who live to affirm that, in spite of the ignoring of carbolic acid in their particular cases, they and their families, and their neighbors, find no self-reproaches to indulge for such eccentric or sensible course adopted in their particular cases.

But is carbolic acid a dangerous substance? A proper answer to this question is a matter of no small importance. I extract the following from the July, 1873, number of "New Remedies, a quarterly retrospect of Therapeutics, Pharmacy, and allied subjects." I will content myself with these quotations: "Numerous cases are reported in recent medical journals of dangerous and frequently fatal poisoning by carbolic acid, resulting from internal administration by misadventure or with suicidal intent, from cutaneous absorption, and from its employment in enemata, and in lotions in the antiseptic system of surgical dressing. For more or less complete details of the individual cases, the reader may consult the reports in 'Schmidt's Jahrbücher,' 1872, No. 10, in 'Caustatt's Jahresbericht' for 1871, and in the review by Dr. Méhu, in the 'Archives Générales de Médicine,' February, 1873."

Again: "Three very remarkable cases of this kind" (i. e., absorption by the skin) "have been detailed by Machin ('Brit. Med. Jour.,' Feb., 1868). Three women afflicted with scabies had their skin rubbed with carbolic acid in mistake for sulphur

lotion. All three rapidly became unconscious, and two of them died. Hoppe-Seyler ('Pflüger's Archiv. Sur. Physiologie,' v. 1872), also relates two similar cases. Two apprentices, suffering from scabies, while rubbing each other on the hands and back with a mixture of carbolic acid, water and alcohol, of which carbolic acid formed about one-eighth, were, during the process, suddenly seized with giddiness and intoxication, and both fell into a state of stupor. One of them died in this state, while the other ultimately recovered, and remembered nothing except the feeling of tension in the head and giddiness which he experienced at the first. So rapid is the absorption from the skin, that Hoppe-Seyler recommends, as a lecture experiment, to paint the abdomen of a dog with carbolic acid, after merely shaving off the hair, in order to show the ease with which substances may permeate the unbroken skin, and the connection of nervous symptoms with the entry of poison into the brain. A case is also mentioned which nearly proved fatal from the injection of a carbolic-acid enema for the purpose of killing ascarides." See pages 452 and 453.

Quite recently Mr. Wünderlick, a druggist in my neighborhood, employed the following mixture, with deadly consequences, on a cat valued by him, and which was suffering from the "mange:" Carbolic acid, one drachm; linseed oil, one pint. One application only was made, which was shortly followed by what seemed to be "cramps," and these were closely succeeded by the death of the animal. While conversing with a medical friend a day or two since upon this subject, I was informed by him that he had lately applied a carbolic-acid lotion to a phagedenic ulcer with fatal result.

I will now introduce the case, whose death is attributed by me to the employment of carbolic-acid disinfection under the ensuing circumstances: The steamboat alluded to by Dr. Perry, as being at the same wharf with the Valparaiso, was the Belle Lee. Three deaths from yellow fever are associated with this steamer during the past season: First, "the mate"; second, Mr. Gatewood, who had the contract for and was engaged in

repairing her; third, the gentleman who had the painting contract. This last case also died, and was a patient of Dr. Wood.

Mr. Gatewood, my patient, was unacclimated, and there was nothing he so much dreaded as yellow fever. During the illness of Mr. Hines, "the mate" of the Belle Lee, Mr. Gatewood was more or less with him. After his death, he (Mr. Hines) was laid out in the cabin, where Mr. Gatewood had occasion several times to pass his exposed body. About 3 o'clock A. M., Wednesday, July 30th, Mr. G. was seized with fever. But stimulated by his terror for this disease and consoling himself with the hope that he only had rheumatic fever (a familiar acquaintance of his), he left his boarding-house for the steamer. Here he laid up all day, refusing to return to his boarding-house until his accustomed hour in the evening. This night was passed most restlessly and most wretchedly, and he dreamed that he had died from yellow fever, and fancied that he heard celestial music in the air. This dream produced a great impression on his mind, and gathering up all his strength, he once more, and against all remonstrance, quitted the house for the steamboat, notwithstanding his terrible head and back pains, and the clinging and persistent fever. He suffered from more or less nausea and retching from the first, but to-day these were intensified by repeated vomitings of Mississippi river water, of which he copiously drank to quench an unappeasable and tormenting thirst. He remained in this place with all the other symptoms of disease increasing steadily in severity, until he was conducted back to his room, which he reached about 10 o'clock P. M., Thursday, July 31st. At 3 P. M. he received a foot-bath, and still refusing to see a doctor, was not visited by me until 10 A. M. the succeeding day. I found him (Friday morning) with burning high fever, excessively restless, and racked with terrible pains about the forehead and back; stomach very irritable and easily made to vomit; eyes "blood-shot"; capillary circulation highly congested; constipated bowels; suppression of urine, with muttering delirium. He had voided no urine since the evening previous, when he received the foot-

bath. It must be confessed that this was anything but a promising case. Addressing my best efforts, however, to the stomach, and especially to the kidneys, I was rewarded at nightfall with about an ounce of grumous-looking urine, which was the first reply to several applications from the catheter. His stomach was more settled, and the restlessness and delirium improved. The night previous having been such a distressing one, and the patient having endeavored to leave his room and seek the gallery for air—expressing himself as consuming, I determined this night to place him under an opiate, as chloral was not well borne in his case. I gave him one grain of solid or gum opium every three hours. This yielded him some sleep, but its happiest effect was evinced in the tranquilizing influence it exercised over him. The next (Saturday) morning, August 2d, I found him in a splendid condition, if I may so term it; there was no nausea, he was able to retain nourishment, the fever had left him since 3 o'clock A. M., the restlessness was gone, the delirium had faded away, and, best of all, his bladder contributed a pint of urine in my presence. Having done so, he turned to me full of confidence and gratitude, and remarked, "Doctor, you will bring me through now." I replied, that I had every reason to look for a favorable issue. I had reported this case to the Board of Health the day before, when I entertained little or no hope for my patient's recovery. With improvement so pronounced; a mind changed from despair to hope; a stomach able to retain nourishment; and more than all, the lost functions of the kidneys restored, I conceive it was only natural and reasonable to be most hopeful with respect to the favorable termination of this case. Thus encouraged, I lost no time in visiting the office of the Board of Health. I met here the sanitary officer, and requested to be allowed to use my own discretion as to preventive measures for securing the rest of the inmates of this household against this malady. I assured him that carbolic-acid disinfection would be disastrous to my patient, and I desired him to forego its employment in this particular case. After a more or less prolonged interview, I

discovered that "Ephraim was joined to idols," and I took my departure, with the only promise that a smaller quantity than usual would be applied about the premises. The carbolic-acid disinfection was enforced, and between one and two hours after its application, I again saw my patient. The lady who nursed him, and the gentleman who sat by him, brought experienced and devoted attention. The lady, in fact, was more than ordinarily concerned in his recovery, being at the time engaged to marry him.

On seeing Mr. G. after this disinfection, I noticed at once a marked change for the worse—his delirium had returned; he was nauseated and disposed to vomit; his restlessness was very great, and his bladder made no response to the catheter. The room was found offensively saturated with the offensively disagreeable, if not poisonous, odor of carbolic acid. I was informed that this change for the worse corresponded with the entrance of this odor into his room. The lady observed that, noticing the bad effects which accompanied the introductlon of this acid into the patient's room, she endeavored to exclude it by shutting all the windows and doors of the house; nothing, however, availed in her efforts to this end. Mr. G. was first observed to grow "flighty," then nausea supervened, and he finally vomited some black vomit, which she showed me; and these symptoms were associated with increasing restlessness. I had been present only a few moments, when he threw up more black vomit. He was now more delirious than he had ever been, muttering and moving incessantly, until he died about 1 o'clock A. M., Sunday, August 3d. His bladder contained no urine within two or three hours of his death. To me this is a very interesting and instructive case, and although "it takes more than one swallow to make a summer," still if this case be not conclusive as to the danger attending this powerfully poisonous and corrosive substance, it certainly proclaims the necessity for extreme care in its use, and must condemn the lavish and indiscriminate employment of so destructive an agent.

The history of this case has elicited from Dr. Perry the ad-

mission, "That in a few critical cases of yellow fever where life is wavering in the balance, the use of carbolic acid may cause a fatal issue." In order to afford some approximate idea of the extensive use of this substance, I will mention that "about seventy gallons of the carbolic acid used, were used per square"; and I will also add the following, which I take from the "New Orleans Picayune" of November 12th:

"*To the City Council*,—I have the honor to present herewith a statement of expenditures on account of disinfectants, from the 1st January to 31st October, 1873, inclusive: Amount appropriated, as per budget, $5,000; amount expended, $1,674.58. On the 7th instant, the accompanying bills were presented by Page & Co. for disinfectants ordered by Dr. White, President of the Board of Health, without the knowledge of this department, amounting to $16,271, for my approval. This amount being much in excess of the appropriation, I respectfully refer said bills to the Council unapproved, and recommend that they be not paid.

A. BREWSTER,
"Administrator of Police."

While on the subject of disinfection, I will offer the following, from the "London Lancet" of September or October, 1871:

"The direct disinfection of the general atmosphere of a town is a task too hopeless to be undertaken by man; as will be manifest from the mere consideration of the vastness of the mass of air to be dealt with, and the comparative minuteness of the materials wherewith to deal with it. Not by one-tenth of one per cent. can all the breathing of all the inhabitants of a town, and the burning of all the fires in it, alter either the percentage of carbonic acid or oxygen in the general atmosphere pervading the town. If, then, our means of influencing the atmosphere are so limited that we can not add to it so much as the one-tenth per cent. of any material, what chance should we have—even if we were to expend the entire national revenue on the undertaking—of so thoroughly dealing with the mass of the atmosphere pervading a town as to eliminate any impurity?

"In the days of the cattle-plague, those who were set in au-

thority over us, made an assault of this description on the atmosphere of the country. They swept the air of the fields with towels dipped in carbolic acid, and borne aloft on the horns of the cattle, hoping thereby to rid the air of cattle-plague germs. As well might they have tried to alter the composition of the Irish Sea. The first step in practical disinfection is the comprehension of the fact that, whether it be poisons or germs we fear in the out-door atmosphere, we can not remove them from it by the employment of anything either to decompose them or to kill them." * * * * *

"When we add to the atmosphere of a room a sufficient proportion of an ordinary gaseous disinfectant to act on the atmospheric impurities, we render it unfit to breathe, and fit only to be sent up the chimney."

One more quotation upon the matter of carbolic-acid disinfection, and I will have done with this substance. The following is from the "Medical Times and Gazette," December 16, 1871, entitled, "Disinfecting Power of Carbolic Acid." I give it in full: "The disinfecting power of carbolic acid seems yet to be dubious, and certainly not so great as to be relied upon. Dr. H. J. Von Aukum inserted a paper in "Morandscheift voor Natuemetenschappen," stating the following facts:

"Atmospheric air, to which are added the vapors emanating from carbolic acid, is unable to hinder the development of lower organisms in water with hay, in milk and in urine. He put these substances under a glass-bell, with an opening at the upper side, and surrounded by little cups filled with carbolic acid. All was placed in a ventilating closet, and the arrangement was such that the air that passed the above-named substances was mixed, if not saturated, with the vapors of carbolic acid. After the lapse of a little time, the development of lower organisms took place just as if the fluids had been exposed to the free air. Von Aukum made use of pure and impure carbolic acid, and only once he saw, in using the impure, strong-smelling carbolic acid, that the formation of those organisms was retarded, and did not take place in so many forms. He

concludes from his experiments that no disinfecting action can be expected from the vapors of carbolic acid, when they are mixed with the atmospheric air in such a quantity that the respiration can take place in it without damage."

Although this paper has been extended beyond the dimensions originally contemplated, I ask a little further indulgence, to inquire if there be not a few facts which point to the possible origination in our midst of yellow fever "germs," without having to look abroad for their introduction? In the "New Orleans Medical and Surgical Journal" for September past, page 307, fifteenth line from the bottom of the page, this statement appears: "Again, it will be seen in some of the cases cited, as in some others not mentioned, no history has been obtained of any exposure within reasonable proximity to the supposed foci of infection." By the "foci of infection" is meant the bark Valparaiso. I continue to quote, "My friend, Dr. B. Stille, has now under treatment a patient who was taken sick at her residence, remote from the river, and from any other case. A patient died in the same house late in the season last year."

My friend, Prof. Joseph Jones, M. D., informs me that he treated a case of yellow fever the past season (1873) in a house located in the "Infected District," where a case had died the year previous (1872), and notwithstanding the supposed thorough disinfection of this house and premises when the death in question occurred.

I will also review in this connection the first case and death from yellow fever, acknowledged by the Board of Health. It will be recollected that the Sanitary Inspector, in his article which I am carefully dissecting, remarks that "the yellow fever of 1873 commenced in this city on July 4th, in the person of J. M. Arran, the mate of the Spanish bark Valparaiso, which left Havana in ballast June 16th, arrived at the Quarantine Station below the city" (i. e., near the mouth of the river) "June 24th; after a detention of two days, the vessel arrived in this city, and was moored at post 48, at the foot of Second street.

The man died July 8th, with well-marked yellow fever." It will also be borne in mind that Dr. George Howe, Resident Physician, Quarantine Station, Mississippi River, has affirmed that the Valparaiso "arrived at Quarantine Station June 24th, P. M., all well"; also, that "she did not get off until seventy-two hours after her arrival"; and further, that "she was visited three times daily by myself, and I saw her officers and crew each visit," and finally, that "the officers and crew were in perfect health up to the time of sailing from here"; i. e., the Quarantine Station.

Dr. Perry, it will be observed, maintains that the sojourn of this bark at the Quarantine Station was only two days, while the quarantine physician assures us that she remained with him, and was visited three times daily by him, during three days. Keeping in view this discrepancy, in the two statements before us, the Valparaiso must have reached this city about the 27th or 28th of June. Seven or eight days, then, after having been "moored at post 48, at the foot of Second street," and nineteen days after having left Havana, "J. M. Arran," her mate, was taken sick July 4th, and died with yellow fever July 8th. It is not probable, after a careful weighing of all the circumstances surrounding this case—not overlooking the fact that this bark was moored in what has been known for the past two years, exclusive of the season or year of 1873, as the "Infected District," that the disease in his case originated here, and was not imported?

The next case in order, is that of Henry West, aged twenty-eight years, from Alabama, who left this city, July 8th, for the dredge-boat Essayon, occupied at the mouth of the Mississippi river. Two days thereafter he became so sick that he returned to and reached this city July 10th. He died with yellow fever July 15th, after having been in the Charity Hospital but a single day.

While I can not afford the space to quote Dr. D. R. Fox's paper on "Yellow Fever in the Country—An Account of Disease as it prevailed on the Coast below New Orleans in 1854

and '55," to be found on page 49, "Report on the Epidemics of Louisiana, Mississippi, Arkansas, and Texas, for the years 1854 and 1855, to the American Medical Association, at the annual meeting in Detroit, Mich., May, 1856, by Erasmus D. Fenner, M. D., of New Orleans," still, I think it important to state that there are six small villages, located as follows, below this city: First, "the Jesuits' Bend Settlement," 23 miles from New Orleans; second, "Point à la Hach," 40 miles from New Orleans; third, "the Ronquille Settlement"; fourth, the "Burat Settlement," 70 miles from New Orleans, in the vicinity of the Quarantine Station; and fifth, "the Balize"; and sixth, "the Southwest Pass Settlement," the last two at the mouths of the river, consisting of pilots and their families. I have the authority of Dr. Fox, given in the above paper, for saying these settlements are in frequent and regular communication by a coast packet with New Orleans and with each other, and that yellow fever is no stranger to them. May not yellow fever be contracted by the required detention of a vessel at quarantine, where the disease itself is often met with?

I have to thank Prof. Joseph Jones, M. D., for the case just quoted (Henry West), and I am also indebted to him for a copy of his late monograph on the "Changes of Temperature and Pulse in Yellow Fever," from which I extract the ensuing interesting report of a case by him, and which I present as another link in the chain of seeming local origin: "Mrs. W., 230 Common street, aged twenty-eight years, has resided in New Orleans eighteen months; large, well developed, with clear complexion and high color in health. Mrs. W. called at my office July 21, 1873, stating that she had just passed through the menstrual period, which had been protracted for ten days, was very profuse, and had confined her to bed. She complained of great weakness, 'heaviness' of feeling, vertigo, and pain in the head, back, and limbs, symptoms which appeared to be attributable, at least in part, to the hæmorrhage, as I had attended her upon previous occasions when suffering from analogous symptoms resulting from profuse menstruation. July 22,

1 P. M., I was called to Mrs. W., and found her suffering with slight febrile excitement; pulse 90, full and strong; face flushed; pain in head, back and limbs. July 23, 9 A. M., face greatly flushed and of scarlet hue, capillaries of the extremities and face and surface generally congested; patient greatly agitated and alarmed; says she has yellow fever, and will surely die. It was difficult, if not impossible, to calm her fears. Skin warm, but bathed in profuse perspiration, pulse 108, full and strong; great pain in back and head. 3:30 P. M., pulse 110, temperature 103.5°; urine abundant, light yellow, slightly turbid from presence of vesical and vaginal mucus; a trace of albumen. Menstrual flow returned for an hour or two during the morning, but ceased again; capillaries of the surface intensely congested; tongue red at tip and edges, furred in centre. July 24, A. M., pulse 118, respiration 30, temperature 106.8°; skin hot and dry. The fever rose in the evening; patient talked and muttered in her sleep, and frequently awoke suddenly with a start and cry; moans and sighs with every breath; is greatly agitated and alarmed; declares the case is utterly hopeless, and that her lower extremities feel as if they were paralyzed. Pain in head, back, and limbs intense; nausea constant and distressing, but no vomiting; heavy, disagreeable odor emitted by the body, as in yellow fever; great congestion of capillaries; face and hands of a scarlet hue; an eruption has appeared upon the forehead; the surface of the face, trunk and extremities is as highly injected and as red as in scarlet fever or measles, but the brilliant redness is more uniformly diffused over the surface than in either of these diseases. Urine abundant; light yellow color; specific gravity 1020; contains a small amount of albumen, with detached cells from the tubuli uriniferi and yellow granular casts, together with vesical and vaginal epithelium. Upon standing, the urine let fall a moderate deposit of urates of ammonia and soda, mingled with the cells and casts. 3 P. M., pulse 108, respiration 36, temperature 106.2°; skin hot and dry; face and surface generally of a deep-scarlet hue; pressure drives out the blood from the capillaries and leaves a white spot,

into which the blood slowly returns. Tongue coated in centre with yellow fur, and red at tip and edges; swollen, with margins indented by the teeth; moist and soft. Nausea, depression, fear of death, and bad odor from body unchanged. 9 o'clock P. M., pulse 112, temperature 106.3°, respiration 38; moans and sighs with every breath; when spoken to answers rationally, but often slumbers, starts, and jumps in a delirious, nervous manner; odor from body heavy and offensive. July 25th, 10 A. M., condition unchanged; pulse 118, full and strong; respiration 36; temperature 108°. The delirium and restlessness of the patient prevented the thermometer being held well in the axilla; the actual temperature was therefore somewhat above 108°, and probably reached 110° to 113° in the cavities of the heart. Conjunctivæ congested; gums red and spongy: odor of body very offensive; surface of face, trunk and extremities greatly congested and of a brilliant scarlet hue; forehead covered with a distinct papular eruption. Urine light-colored, specific gravity 1020; albumen in considerable amount, numerous granular casts of tubuli uriniferi, kidney cells, granular yellow albuminoid matters, and amorphous deposits of urates of ammonia and soda. Two hours after I was summoned to the bedside of the patient, and found her in articulo mortis; pupils contracted; spasmodic respiration, with death-rattle in the throat. I was informed that she had started suddenly in a disturbed sleep, made several ineffectual efforts to vomit, and passed immediately into this state. She was unable to swallow. Sinapisms were freely applied, but without effect."

The Sanitary Inspector states, "of the first ten cases, eight had recent and direct communication with the first two cases." The Board of Health have never been able to prove any direct communication between their *two first cases*. They both occurred on distinct and separate vessels, moored at the same wharf, and "about thirty yards distant" from each other. The one sickened July 4th, and died July 8th; the other fell sick July 12th, and died on the 20th. Both of these vessels lay at a wharf located in the "infected district," and the two cases

occurred almost simultaneously. The two cases furnished by Prof. Jones, and above given, had no possible connection with either of these vessels, and sickened and died at widely remote distances from them. The one falling sick July 10th, and died July 15th; the other being seized July 22d, and dying on July 25th. These four cases presented almost at the same time, and occurred in separate, and with respect to half their number, at least, in far distant localities and widely apart from each other.

From page 424 of the November, 1866, issue of the "New Orleans Medical and Surgical Journal," I extract the following from an article of mine, entitled, "Health of New Orleans," being at that time Health Officer of the Second District of this city: "I noticed in the medical ward, of which I had charge in the Charity Hospital, a great disposition on the part of ordinary intermittent fevers, as early as the first of June, to suddenly assume the congestive type—in other words, to become pernicious intermittent fevers. This condition continued until the 13th of June, when Magdalena, daughter of Lorentz King, a native of France, aged about twenty years, and a resident in this city about thirteen years, was admitted and assigned to my ward. She was in the employ of a Mr. Nicholas Shurman, a small retail grocer on Cypress street, nearly on a line with the Hotel Dieu, and within a stone's throw of the New Basin. She had appeared very well on Sunday, the 9th of June, and went out visiting that day. Monday she went through her usual duties. Tuesday, cooked breakfast, but was manifestly indisposed, lying about on the floor, complaining of terrible headache and backache, associated with retching and vomiting, and refusing to eat. The matters thus ejected were said to look like water. She had also considerable fever, and was sent to bed. Wednesday, fever still high with continued gastric irritability and vomiting. Patient reported to have taken no nourishment since Monday. Wednesday night, patient apparently worse, and fever very high. Thursday, patient cold and vomiting black-looking matter, described as resembling coffee-grounds. To-day her father was sent for, and entered her in

my ward, about 8 o'clock P. M. She died at 4 o'clock Friday morning. Cadaveric examination made at 10 o'clock same morning, revealed an enlarged anæmic-looking liver, an hypertrophied spleen considerably congested, and breaking under small violence; stomach and small bowels generally inflamed. The integuments were tinged yellow, and the adnata mildly so. While in my ward, and but a moment before death, she vomited about three pints of black vomit, which I saw. So well convinced was I that the case before us was one of yellow fever, I consumed half a day in hunting up the father and the employer of this young woman, in order to procure a full history of her case, which I immediately recorded in my case-book, and from which I borrow the above facts. This case was not reported as one of yellow fever, because a sufficiency of evidence was not obtained at the time to justify such a diagnosis. Some few days later, several suspicious cases" (i. e., entering at this juncture,) "offered in the hospital, and these went on increasing by degrees until the cholera exhibited itself. Some of the highest medical authorities in this city saw these cases, and expressed the opinion, that were yellow fever present, they should pronounce them such. There can be small doubt now touching their true nature. When cholera presented, these cases disappeared. On the 12th of August a case of death by yellow fever occurred at the Hotel Dieu, which was reported to the Board of Health. This is the first case mentioned in their accompanying table."

In order to be well understood, let me say here, I stated the fact of my patient, Mr. Gatewood, having been with Mr. Hines, of the steamer Belle Lee, both before and after his death, as a fact merely—a coïncidence. I do not wish to be considered as believing the disease to be contagious—the same source of infection might have assailed him, or he might have contracted the disease elsewhere. I state this because I know too many instances where unacclimated persons have nursed friends and relatives sick with this disease and have escaped unscathed; while upon other occasions—the next year—they have taken

the disease while unusually cautious about exposing themselves. But I may be asked, how was it that no cases of yellow fever occurred in New Orleans, or among the United States troops, during its military occupancy under Butler, if it may be generated independently of importation? I answer, that I am aware that many persons, and among these some physicians, entertain such a belief, but that I am prepared to prove its erroneousness.

In a note at the foot of page 890, "Flint's Practice of Medicine," third edition, is recorded the following upon this subject: "Under military rule, sanitary regulations were enforced to a degree before unknown in that city. A considerable number of cases of yellow fever occurred in filthy and unventilated gunboats lying idly at anchor within a mile from the densest portions of the city. Yet the disease did not become epidemic in the city. 'Nearly three and a half years passed without so many as a score of sporadic cases occurring in the streets where that enemy and pest of the city had been wont to destroy its thousand victims every year, and sometimes to kill no less than five thousand in a single month!'"

I must be permitted to pause here to correct what I believe to be a grave error. An examination of the yearly mortality from all diseases from 1787 to 1853, inclusive, does not warrant such a statement. The year 1832 furnished the largest death list, and this year was the most fatal yellow fever year above named. Our population then was 55,084, and we lost during this year 8,099; this is a death rate of 147.02 per 1.000 of population. The next most fatal yellow fever year was 1853, our population being at that time 154,182, when we lost during that year 15,787 persons from all diseases—i. e., 102.42 per 1,000 of population.

To continue my quotations from "Flint's Practice," etc., see paper by Dr. Elisha Harris, entitled "Hygienic Experience in New Orleans During the War," "Bulletin of the New York Academy of Medicine," No. 30, Sept., 1865. See also a paper by the late Professor E. D. Fenner, of New Orleans, writ-

ten just before his lamented death, "Journal of Medical Sciences," vol. i., No. 1, May, 1866. To these may also be added a monograph from the interesting and instructive pen of Dr. J. C. Faget, of New Orleans. I hope I have made it clear that we did have yellow fever in or about this city during its occupancy by Butler, and in spite of the fact, that "sanitary regulations were enforced to a degree before unknown in that city," meaning New Orleans.

In the same edition of "Flint's Practice," page 383, the following will be found: "The rise and progress of epidemics are not consistent with its diffusion by contagion. For example, my former colleague, the late Prof. Fenner, with great zeal and fidelity, traced the first thirty or forty cases in the epidemic at New Orleans, in 1853, and ascertained that the disease broke out in different places among persons who could have had no communication with each other. Professor F. investigated the origin and spread of the disease in New Orleans for twelve years, and states that he never found the least proof of personal communicability. This is alike true of epidemics in other places. In certain places, within the yellow fever zone, sporadic cases occur almost every year. Professor Fenner states that a summer never passes in which there are not a greater or less number of sporadic cases in New Orleans, but the disease prevails as an epidemic only in certain years. Were the disease contagious, it should be diffused more or less whenever there are any cases of it. When it prevails as an epidemic, it spreads too rapidly to be diffused by contagion. If diffused wholly or chiefly in that way, it must be highly contagious, and this is opposed by well-known facts."

Again, from the same author, page 884: "Numerous experiments to test the question of the communicability of the disease, by inoculation, by swallowing the black vomit, and by the utmost possible exposure, have led to negative results. To cite one among many experimental observations, Dowler gives the following account: In 1805, Don Cabanallos, a Spaniard, slept a night with his children in bed, in the Lazaretto, in which yel-

low fever victims had died. For submitting the question of contagion to this personal test he was made physician to the Royal Household, with an annuity of $1,200. A number of galley-slaves who accompanied him had one year's imprisonment remitted. The whole party amounted to fifty, and no one suffered any harm. Complete seclusion has proved ineffectual to prevent the disease."

It may be important to mention here that the sanitary regulations enforced by Butler, had reference to keeping the city and its various premises scrupulously clean, and the taking of proper steps to insure the best possible drainage. He had nothing to do with carbolic acid and other so-called disinfectants.

The late much lamented Professor Warren Stone, M. D., has often remarked to me that, in his opinion, disinfectants did more harm than good, by making an existing nuisance, or bad odor, with an even more disagreeable peculiarity of its own. He very sensibly remarked, that if a noxious effluvium or odor existed, he preferred to be made aware of this fact by his natural senses, in order that he might take steps looking to its removal, rather than to seek to cloak or conceal it.

There is another statement recently made by Dr. Perry which ought to be noticed here. By referring to the January, 1874, number of the "New Orleans Medical and Surgical Journal," p. 569, fifteenth line from top of page, the following statement may be read: "It has been found by past experience that yellow fever does not develop into an epidemic here in less than fifty or sixty days. Indigenous cases rarely occur before August 1st, and this is so late that an epidemic can not follow. No epidemic has ever followed in this city when the first case has been as late as August 1st. Most, if not all, of our epidemics of yellow fever have resulted from the importation of foreign yellow fever in May or June."

I am under obligations to Dr. A. F. Axson, of this city, for a full history of the yellow fever epidemic of 1841. This can be found in the "New Orleans Directory," 1842, where also

the names, with dates given, of all who died from that disease, are also recorded.

Dr. G. B. Henderson, of this city, who practiced in this epidemic, informs me that the Board of Health was only organized during the progress of the epidemic. The list mentioned "of the names of the persons who died of yellow fever," * * "was laboriously and carefully prepared by the 'New Orleans Evening Post' from the official orders sent with each body to the cemeteries." Only two deaths occurred in July—Martin Dowler, July 20th, and John Ditty, July 31st. In the month of August there were one hundred and seventy-three deaths; in the month of September, one thousand and thirty deaths; in the month of October, four hundred and thirty-one deaths; and five deaths in November, as follows: One, November 1st.; two, November 2d; one, November 4th; and the last death, November 6th, thus summing up a total mortality from yellow fever of 1,641 deaths. The population of this city in 1841 was something over one hundred thousand souls. It is hardly necessary to add, that the yellow fever epidemics of 1873 in Memphis, Shreveport, Bainbridge, Ga., and in Columbus, and other Texas towns, with their frightful mortalities, commenced sometime in August. And I possess many more facts of the same purport. I can hardly conclude this paper without recording the fact, that during the past summer and autumn of 1873, there prevailed in our midst a most general and searching epidemic of "Deugue." Nearly everybody, without respect to acclimatization, experienced more or less of an attack from it. It sent many of our physicians to bed; and among them our very oldest practitioners of this city. The Deugue paid no respect to the disinfection of the Board of Health; and it prevailed as freely in the "infected district," notwithstanding that the atmosphere here was kept constantly charged with the odor of carbolic acid, as it did in every other portion of this city. This disease was often met side by side with yellow fever. In fact, a case would recover from "Deugue," fall sick again, and die with black vomit.

In order to be a faithful chronicler, let me say, in conclusion, that many physicians entertained the belief that the epidemic from Deugue saved us from the severer one of yellow fever; while others again believe that Deugue was nothing less than mild yellow fever itself. I met some of our oldest yellow-fever physicians who were sorely puzzled as to what diagnosis to make, and who finally made the urine settle this point for them. If albumen obtained, the case was diagnosed yellow fever; if none was found, the case was considered to be Deugue. This respects more especially the favorable cases. Those dying with black vomit were self-evident and free from doubt.

C. H. TEBAULT, M. D.,
Formerly Visiting Physician of Charity Hospital and Health Officer of the Second District of this City in 1866–7.

PROCEEDINGS OF SOCIETIES.

"Etsi non prosunt singula, juncta juvant."

CENTRAL KENTUCKY MEDICAL ASSOCIATION.

This Association held its thirteenth regular meeting at Danville Wednesday, 21st instant, in the Odd Fellows' Hall, at 10 o'clock A. M., the President, Dr. Reed, of Lowell, in the chair.

The debate was opened by Dr. Burdett, of Lancaster, with a paper on "Disinfectants and their Utility." Dr. Dunlap, of Danville, reported a case of "Fibroma," exhibiting afterward the patient. Dr. Jackson, of Danville, read reports of two cases of "Tracheotomy," with recovery—one in diphtheria, and one in croup. Dr. Bailey, of Standford, read a report of a case of "Morbus Cordis, complicated with "Rheumatism and Hæmorrhagica Purpura." Rev. Dr. Taylor, of Danville, by request, exhibited a drawing, illustrating the Chinese ideas of the structure of the internal viscera, and gave an interesting summary of their fanciful notions of the functions of these

organs, and of human anatomy in general. Dr. Jackson, of Danville, exhibited a roll of "India-rubber Bandage," used in performing Esmarch's bloodless operations; two "Plaster Casts," one showing the throat, fauces, etc., the other, all the movements of the eye; some instruments, models, etc., used in ophthalmology, and a specimen of "Croton-Chloral Hydrat." Dr. Cowan, of Danville, exhibited his modifications of the "Catheter," and explained their advantages. Dr. McKee, of Danville, exhibited an enlarged "Prostate," excessive in the third lobe, and gave a short history of the case. Dr. Jackson exhibited specimens of "Abnormal Distribution of Blood-vessels," and a specimen of an unusual form of "Acute Tuberculosis."

The following officers were elected for the ensuing term: President, Dr. J. D. Jackson, Danville; Vice-President, Dr. A. D. Price, Harrodsburg; Recording Secretary, Dr. G. T. Erwin, Danville; Corresponding Secretary, Dr. S. Burdett, Lancaster; Treasurer, Dr. W. B. Harlan, Danville.

The meeting was well attended, and some new members were added.

After a vote of thanks to the Odd Fellows for the use of their Hall, the Association adjourned at 4 o'clock P. M., to meet at Lancaster on the third Wednesday in April next, when the debate will be opened by Dr. Spilman, of Harrodsburg, on "Embolism."

Fleming County (Ky.) Medical Society.

Pursuant to a call, a number of the physicians of Fleming county, Ky., met at the office of Dr. Plummer, Poplar Plains, Ky., at 1 P. M., December 3, 1873. Dr. Allin, of Tilton, was called to the chair, and Dr. Plummer appointed Secretary. Dr. Allin explained that the meeting was called for the purpose of organizing a "County Medical Society." After some little discussion on various subjects in connection with the formation of the Society, Dr. R. H. Yantis proposed for consideration the form for "Constitution and By-Laws," published by S. W. Butler, M. D., of Philadelphia, Pa.

Moved and carried, that the permanent action on the Constitution and By-Laws be postponed until next meeting.

Moved and carried, that the election of permanent officers of the Society be postponed until the next meeting.

Dr. Plummer was appointed essayist for next meeting. Subject: "The Importance of County Medical Societies."

On motion, Society adjourned to meet at the office of Dr. McDowell, in Flemingsburg, Ky., at 1 P. M., the third Wednesday in December, 1873.

H. PLUMMER, Secretary.

OFFICE DR. L. MCDOWELL,
FLEMINGSBURG, KY., Dec. 17, 1873.

Pursuant to adjournment, the physicians of Fleming county met in Flemingsburg the third Wednesday in December. Present: Dr. Allin, of Tilton (in the chair); Dr. McDowell, of Flemingsburg; Dr. Yantis, county, and Dr. Plummer, of Poplar Plains. Minutes of preceding meeting read and approved.

It being in order, the Society proceeded to the election of permanent officers for the ensuing six months. Dr. L. McDowell, President; Dr. Allin, Vice-President; Dr. Plummer, Recording Secretary; Dr. R. H. Yantis, Corresponding Secretary and Treasurer.

After establishing a regular order of business, Dr. Plummer read his essay. Subject: "The Importance of County Medical Societies."

After attending to regular business, and a free discussion on various subjects in connection with county societies, Dr. McDowell was appointed essayist for next meeting. Subject: "Use of Medicines Hypodermically."

Society adjourned, to meet at the office of Dr. McDowell, in Flemingsburg, Ky., at 1 P. M., the first Wednesday in January, 1874.

L. MCDOWELL, President.

H. PLUMMER, Secretary.

CHEMICAL AND PHARMACEUTICAL.

"Diruit, ædificat, mutat."—Hor.

Art. I.—Action of Croton-Chloral Hydrate. By Oscar Liebreich, M. D., Professor of Materia Medica in the University of Berlin.

I have the honor of directing attention to a new remedy, which serves to corroborate the theory I have propounded with respect to the action of hydrate of chloral.

When chlorine gas acts on aldehyde, croton-chloral is formed, as has been demonstrated by Dr. Krümer and Dr. Tinner. In order to avoid a mistake which is apt to be caused by the name, I must here remark that this body possesses no relation whatever to croton oil, although its chemical constitution proves it to be the chlorated aldehyde of crotonic acid. Croton-chloral differs in its outward appearance from hydrate of chloral, differs widely from the latter with regard to its physiological effects. Four *grammes*, or a drachm, of this substance, dissolved in water, and introduced into the stomach, produce in the course of from fifteen to twenty minutes a deep sleep, accompanied by anæsthesia of the head. Whilst the eyeball has lost its irritability, and the nervus trigeminus shows no reäction whatever on being irritated, the tone of the muscles remains unaltered.

I have experimented with this remedy on maniacs during an attack of mania. They remained quietly sitting in their chairs in a deep sleep, their pulse and respiration being unchanged for two whole hours together. If anæsthesia had reached so high a degree in consequence of the application of hydrate of chloral, the patients would have dropped from their chairs, and both their pulse and respiration would have been considerably retarded. I have seen croton-chloral acting in the same way on healthy individuals. In some cases of tic douloureux, the remarkable phenomenon is exhibited that pain ceases before sleep sets in. I am sorry to say, however, that this remedy

acts only as a palliative in this dreadful disease. I nevertheless prefer its action to that of morphia, because it has effects as good as the latter remedy, without being so detrimental to the constitution in general. I have never observed any unfavorable effects of croton-chloral on the stomach or any other organ, although I have made frequent experiments with it.

The indications for the use of this remedy are to be found: 1. In cases where hydrate of chloral is inapplicable on account of heart disease: 2. In cases of neuralgia in the district of the nervus trigeminus; 3. In cases where very large doses of chloral are necessary to produce sleep. I there recommend the addition of croton-chloral to hydrate of chloral.

Whilst examining the difference between the action of hydrate of chloral and that of croton-chloral, I have discovered the remarkable fact that it is not the first, but the second product of decomposition of the latter substance which is brought into action, on account of the first being rapidly destroyed. Croton-chloral, when subjected to the influence of an alkali, first forms allyl-chloroform, a trichlorated body, which is rapidly decomposed into a bichlorated substance called bichlorallylene. Now, both chloroform and trichlorated substances act, as I have shown, in their first stage on the brain, in the second on the spinal cord, and in the third on the heart. The retardation of respiration is to be explained by the agency of these substances on the last-mentioned organ. Bichlorated substances act differently, as is proved by bichloride of ethylene. Even if the circulation of the blood in an animal has been stopped by this latter agent for one minute, life may be restored by artificial respiration, which is impossible whenever trichlorated substances have produced this effect, in which case the muscles of the heart remain paralyzed. Well, in animals poisoned by croton-chloral to such a degree that both circulation and respiration are stopped entirely, artificial respiration is able to restore the action of the heart immediately, and the life of the animal may thus be saved. Bichlorallylene, inhaled by the lungs, produces the same effect on animals as croton-chloral. We thus

see bichlorated substances acting on the brain, spinal cord, and medulla oblongata, but not on the heart, which explains the fact that both respiration and circulation remain unaltered in man by a medicinal dose. It is a highly interesting fact, however, that under favorable conditions, we still are able to produce in animals the effects of the first product of decomposition of croton-chloral—i. e., of the trichlorated substance or of allylchloroform. In order to observe these effects, it is necessary to introduce immense doses of croton-chloral into the body, when paralysis of the heart actually does ensue.—*Brit. Med. Jour.*

ART. II.—PURIFICATION OF CRAB ORCHARD SALTS. By RICHARD V. MATTISON. [Read at the Pharmaceutical Meeting December 16th.]

Among the purgative medicines used in various sections of this country, none are more rapidly finding favor among physicians and the general public than the salt obtained by evaporating the waters of the springs of Crab Orchard, Lincoln county, Ky.

As the salt appears in our market, it is of various degrees of color and purity. It is usually prepared by concentrating the water in iron kettles, and then allowing the concentrated water to stand at rest until the largest portion of organic matter is precipitated. The supernatant liquid is then decanted, more or less care being used, and evaporated. The yield is about 1 to 1.25 per cent., ten gallons of the water yielding about a pound of the commercial salt. Much more care was formerly used in the preparation of this salt than now, and of late years the salt has gradually grown more and more impure, owing to the ready sale found for it, which fact was noticed in a letter from the proprietors, a short time ago, in which they remarked, that "the supply was not equal to the demand."

When dissolved in water, the solution of the commercial salt

presents a very unsatisfactory appearance, and is certainly very far from being inviting as a medicine. This should be remedied; in fact, Crab Orchard Salts should never be dispensed without first being *purified*, which is easily done by the following process (which I think should be performed at the spring before the salts are ever offered to the market). Dissolve the salts in boiling water and filter through paper, or, on a large scale, flannel bags are best. The filtrate is then evaporated carefully to dryness, stirring meanwhile to favor granulation and prevent caking. If the directions are carefully followed, the production will be a beautiful snow-white salt, perfectly soluble in water; one which the pharmaceutist can recommend and dispense with satisfaction; more active than the ordinary salts, as it is free from the insoluble earthy admixtures of alumina, calcium sulphate, etc. The purified salts usually contain much less water than the commercial, which varies very much, the amount ranging from 35 to 50 per cent., the mean being usually about 40 per cent. The active ingredients seem to be principally magnesium and sodium sulphates, also a considerable proportion of potassium sulphate, with sodic and lithic chlorides. A small amount of ferric oxide is left in the filter, but the amount is so small that I think it of little consequence that the purified salts do not contain it.

Large quantities of spurious salts are prepared by a House on one of the principal streets of Louisville, but with such secrecy that stores only a few squares distant sell the salt without a doubt of its genuineness. It seems to be principally magnesium sulphate, with a small proportion of ferric sulphate.

After considerable experience in purifying Crab Orchard Salts, I may state that the usual amount of organic matter in the salts is from 8 to 12 per cent. From 20 to 85 per cent. of loss is sustained in the purification, the greater portion of the loss being water. This loss need not be met by pharmacists generally, a partially anhydrous salt being desired by myself for the production of an *active* granular effervescent salt. I would commend to all the advantage of preparing the

purified salts themselves, the preparation of a few pounds being a matter of little trouble, and yielding a fair remuneration by the satisfaction accorded and increase of sale.—*Amer. Journal Pharmacy.*

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

"Judex damnatur cum nocens absolvitur."

TREATISE ON THE DISEASES OF CHILDREN. By J. FORSYTH MEIGS, M. D., and WILLIAM PEPPER, M. D. Fifth Edition. Revised and Enlarged. Philadelphia: Lindsay & Blakiston. 1874.

This work, now in its fifth edition, is too well known to render much notice of it necessary. The volume is materially enlarged. The subjects which form the basis of this enlargement are as follows: Thrush; convulsions; chorea; tracheotomy in croup; parasitic skin diseases; diseases of the stomach; diseases of the heart; eczema; cyanosis; diseases of the cœcum and appendix vermiformis, and intussusception; chronic hydrocephalus; tetanus; atrophic infantile paralysis; facial paralysis; rheumatism; diphtheria; parotitis; tuberculosis; infantile syphilis; typhoid fever and scleroma. The additions mentioned amount to at least two hundred pages. The work is eminently practical, while, at the same time, it is a fair reflex of the progress of medical science in the departments analyzed. It has been well issued, and is confidently commended.

THE SPHYGMOGRAPH—ITS PHYSIOLOGICAL AND PATHOLOGICAL INDICATIONS. By EDGAR HOLDEN, A. M., M. D. Philadelphia: Lindsay & Blakiston.. 1874.

This is the well-known Essay to which was awarded the Stevens' Triennial Prize by the College of Physicians and Surgeons of New York. It is profusely and beautifully illustrated. The reader can form a fair conception of the prodigal-

ity of illustration when he learns that in 170 pages there are 290 illustrations; and these illustrations are beautifully designed and presented. The tracings given not only show the changes of the pulse in disease, but they also manifest the changes produced in the pulse by medicines; gelseminum, quinine, aconite, etc. To those who wish to study the actual and reliable facts in regard to the modern science of sphygmography, this volume is earnestly commended. It is beautifully issued.

CLINICAL NOTES ON THE ELECTRIC CAUTERY IN UTERINE SURGERY. By J. BYRNE, M. D., M. R. C. S. E., etc. New York: William Wood & Co. 1873.

This neat and well-written little volume is intended to demonstrate the good effects of the electric cautery in uterine surgery The author is pardonably enthusiastic in regard to the surgical agent which he so eulogizes and recommends. It is at least a bloodless method of performing gynæcological operations, and on this account will receive due attention. It is a method of operating which can only be estimated by the crucial test of experience. It will doubtless receive this, and it is for the recorder of the results, rather than the reviewer of the principles involved, to decide whether this addition to uterine surgery will be accepted by the Profession at large. The publishers have issued the volume in a commendable manner, and the illustrations add much to the value and the appearance of the work.

DISEASES OF THE EAR, INCLUDING THE ANATOMY OF THE ORGAN. By A. D. WILLIAMS, M. D., St. Louis, Mo. Illustrated. Robert Clarke & Co., Cincinnati, Ohio. 1873.

Every one welcomes a practical and clearly-written work upon the diseases of the ear. The subjects to be studied are obscure at best, and the practitioner usually gropes after the unknown, instead of adopting, as usual, the demonstrable principles which have been contributed and verified by pathology. The characteristic of this volume by Dr. Williams is, that it is

conspicuously practical, and that the reader has at least some method of treatment definitely recommended, instead of being left to make his own "tale of bricks" from the straw which each editorial Israelite has offered. The work is of moderate compass; well printed; well illustrated; a credit to the Western House which has issued it. It is to be hoped that it will be well sustained.

CONTRIBUTIONS TO PRACTICAL SURGERY. By GEORGE W. MORRIS, M. D. Philadelphia: Lindsay & Blakiston. 1873.

This volume is composed chiefly of essays contributed to the "American Journal of Medical Sciences," and doubtless perfectly familiar to the readers of that well-known publication. The best portions of the work are those in which are discussed the principles and practice involved in the treatment of ununited fractures; operations upon the larger arteries; fractures; amputations, and false joints. Much attention has been given by the author to the safe deduction to be made from carefully-tabulated statistics; a method once much repudiated, but now receiving more and more the attention and confidence of practical surgeons. The labors of Simpson, Callender, Erichsen, Norris, Simon, and many others, demonstrate that this field is a rich and fruitful one, and that the harvest is sustaining and valuable. That portion of the volume devoted to an analysis of the causes of non-union of fractures, with the treatment necessary, is a magnificent contribution to surgery. It is a mirror of the past and present. There is nothing superior to it that has ever been published. It is a beautiful and wonderful monument to the unwearied energy, the splendid industry, the powerful analytical ability, and the sound judgment of the venerable and accomplished author. Every surgeon is advised to purchase this volume.

TRANSACTIONS OF THE AMERICAN MEDICAL ASSOCIATION, VOL. XXIV., 1873.

The terse, prudent, and witty aphorism, "the least said, the

soonest mended," has never been so appositely applied, as when used in regard to this volume. The Bard of Avon has happily made Polonius testify, that "brevity is the soul of wit." The testimony of the American Profession is, unquestionably, that the Transactions of their chief Medical Society will forever be soulless, unless, in recognition of this philosophy of old Polonius, there be published a title-page only for each volume.

The Transactions are published usually from eight to ten months after they have been read by every reader of a respectable medical journal. The papers presented are, as a rule, those which Job would term "a weariness to the flesh"; and if the most patient man would so term them, what must be the testimony of impatient humanity? No one, seriously speaking, is willing to send a really valuable paper to the Association and have it buried in the "Transactions." This grave is, appropriately enough, decked in solemn and funereal black; its interior is carefully elaborated and most expensively prepared; but still it is a grave; unpleasant; repulsive; the gloomy resting-place in which none, unless unwillingly or inadvertently, deposit, for custody, their beloved offspring. As one stands at the gaping mouth of an old mausoleum, and, involuntarily, whispers, dark and gloomy; musty and mouldy; hideous charnel-house; in which lie decaying, unseen, uncared for and abandoned loved ones; there resting until the final day of all things is at hand; so the physician feels as he stands before the endless row of black and gloomy volumes, which, in the past twenty-four years, it has been the misfortune of the American Medical Association to construct, and to consign their contents to eternal oblivion. Is it not time for this farce to cease? Great players are leaving a stage, on which is chiefly presented the burlesque and travestie of the great drama of modern medicine. Let there be published in the Transactions only the results of original investigations. All other papers should be sent for winnowing and chaff-cleansing to the Medical Press of the country. This would be a great reform. Dr. Toner must inaugurate it.

EPIDEMIC YELLOW FEVER IN MONTGOMERY, ALA., SUMMER OF 1873. By R. F. MICHEL, M. D., Montgomery, Ala.

This pamphlet is a positive contribution to the demonstrable facts connected with the etiology as well as the history of yellow fever in this country. The facts have been obtained with great care, labor and fidelity, and those who have the pleasure of knowing Dr. R. F. Michel, know that what he presents, as the facts of this epidemic, may be relied upon as unimpeachable testimony. That, in a few instances, he may have erred, is possibly true, but the mass of facts presented is most valuable and authentic. The author, as an averred non-contagionist, demonstrates, beyond a doubt, that yellow fever was introduced directly into Montgomery from Pensacola; into which latter city the disease was introduced by the "Golden Dream"; "a filthy craft" from Havana. When the disease was carried into Montgomery, it spread by unquestionable infection. Its whole history proves this clearly. The pestilence was transported to Montgomery, and subsequently it was demonstrably transported into families in direct communication or relation with the sick. The author, a non-contagionist, deserves much praise for his thorough exposition of evidence, whose logical effect is to overthrow the cherished views of his whole professional life. With a city thoroughly clean and well drained; with cellars dry and thorough disinfection practiced by the authorities; the possibility of local cause for the disease was repudiated by the direct vote of the medical staff of Montgomery. The author ridicules the claims of there having been by any possibility a local cause for the epidemic. The city being clean and healthy, a yellow fever patient from Pensacola enters its precincts, and from that period, a fatal epidemic distinctly traceable from house to house and from patient to patient, desolates the town. This statement needs no comment. It tells the whole story of a portable contagion, in language whose every word is a demonstrable fact. The mortality was about 20 per cent. Treatment; rest; mild dietetic and medicinal support; the repudiation of mercury; the prophylactic use of

quinine; general attention to the secretions and minute attention to the heart. The Profession of Montgomery acted nobly. Their success was most creditable. Their suffering great. Their profit almost nil. Their testimony most valuable. Dr. Michel deserves and will receive much commendation for his excellent paper.

CLINICAL LECTURES ON VARIOUS IMPORTANT DISEASES. By NATHAN S. DAVIS, A. M., M. D., Professor of Principles and Practice of Medicine and Clinical Medicine in Chicago Medical College. Edited by FRANK H. DAVIS, M. D. J. J. Spaulding & Co. 1873.

This is a very practical, concisely written, and most useful volume. It is a republication for the most part of lectures published in the "Chicago Medical Examiner." The author is an old, careful and efficient teacher, and his son, the editor of the volume, has presented his fathers lectures most creditably. The chief subjects of the lectures are as follows: Continued fever; periodical fever; rheumatic fever; the exanthemata; the diseases of the respiratory organs; tuberculosis; diseases of the intestines; uterine troubles; cardiac diseases; nervous affections; cerebral troubles; cutaneous diseases, etc. The author has cultivated a large field, and offered these most acceptable fruits as the results of his long and efficient labors. The volume will be very acceptable, and it is hoped that its publication will be as profitable as it is creditable.

MISCELLANEOUS.

"Non omnes eadem mirantur ament que."

Drunkenness and Death in Connecticut.—Dr. B. N. Comings, in a report made to the State Medical Society on the subject of intemperance in Connecticut, says: "Careful statistics have been gathered in a few communities, from which we may safely

make an approximate estimate that there are not less than 20,000 inebriates in the State, and probably twice this number of moderate drinkers. In one of the cities with only 12,000 inhabitants, a careful estimate gives 497 drunkards, 824 occasional drunkards, 2,489 habitual drunkards, of whom 330 are females. Of all the men over twenty-one years of age who have died for the last five years, fifteen out of every forty-one, or more than one-third, were intemperate. Taking the facts, so far as known, as a basis of estimate, not less than one-fourth of all the men over twenty-one years of age, who die in Connecticut, are intemperate."—*Exchange.*

Liquid Glue.—An excellent liquid glue can be made by dissolving glue in nitric ether. This ether only takes up a certain quantity of glue, so that there is no danger of the solution being too concentrated. The glue obtained in this way always has the consistency of molasses, and its tenacity is said to be twice that dissolved in hot water. A few pieces of India-rubber of the size of a bullet put into the glue and well shaken, will dissolve in a few days, and add to the adhesiveness of the preparation, as well as protect it from the action of moisture.—*Druggists' Circular.*

Infanticide.—Dr. W. Hansel Griffiths calls attention to the fact that a sharp instrument, such as a needle or bodkin, can be thrust up under the upper eyelid of an infant, made to pierce the orbital plate of the frontal bone, enter the brain, and cause death with no other symptom than a convulsion, and not only leaving no external mark whatever, but causing neither a fracture of the bone nor the escape of a single drop of blood. In experiments on animals Dr. Griffiths has found the utmost difficulty in detecting the wound on making a post-mortem examination; and he suggests that in cases of sudden death of infants from "convulsions," it is the duty of the medical man to make an autopsy as soon as possible, and investigate minutely the state of the orbital walls.—*The Lancet.*

Treatment of Shortened Limbs.—Professor Francesco Rizzoli, of Bologna, reports a method for treating the lameness produced by a shortening of one inferior extremity, practiced by him four times successfully, which consists in producing an artificial fracture of the healthy femur and allowing it to heal with a corresponding amount of shortening. The case reported was that of a girl, thirteen years old, who had considerable shortening from hip-disease of the left side, the tip of her great toe scarcely touching the ground. The right femur was fractured by means of an "osteoclast," and the lower and upper fragments were pushed by one another sufficiently to make the two limbs of equal length. On the twentieth day the patient was walking about. The author mentions deformities of the pelvis which arise from shortening of one leg, and quotes a series of cases, giving the measurements. A number of illustrations are also given.—*Boston Journal.*

The Premonitory Symptoms of Insanity, is the title of an article published in the "Cincinnati Lancet and Observer," of January, 1874, which bore so striking a resemblance to a paper published in this Journal of November, 1873, as to induce us to compare them. The only difference perceptible was a slight one between the name of the author appended to the "Lancet and Observer" article and that subscribed to the original manuscript in our possession. It is true that there is no copyright in such matters; but still, gratitude (not to speak of another still more necessary virtue), demands a recognition of the sources of our benefits.—*H., in Chicago Med. Times.*

Notice to Incorrigible Smokers.—The "Journal of the Société des Arts" announces that a Belgian chemist, M. Melsens, has just discovered that the amount of nicotine contained in various kinds of tobacco varies greatly according to the locality in which the plant is grown. The tobacco of France thus contains seven ninety-sixths or nearly eight per cent. nicotine, while Havana contains two per cent.

To protect smokers against the injurious effects of nicotine, Melsens advises them to put in their pipes or amber mouthpieces a small amount of cotton impregnated with citric and tannic acid. The smoke in traversing the cotton gives up to it its nicotine which combines with the two acids to form the citrate and tannate.—*L'Union Medicale du Canada.*

Salivation.—Dr. Ebstein reports in the "Berliner Wochen Schrift, 1873, No. 25, experiments demonstrating the inhibitory action of atropine upon the chorda tympani nerve, practically applied in arresting salivation, which he believes to be due to irritation of this nerve.—*Practitioner.*

MEDICAL NEWS.

'Nulla dies sine linea."

The Cattle Disease in Russia.—In European Russia it is stated that the annual loss of cattle from epizoötic disease is estimated at 400,000. Each animal is valued at thirty roubles, making thus a direct annual loss in money value of twelve million roubles.—*Ex*————*The Siamese Twins.*—These twins died, near Greensboro, N. C., on January 17th. At 6 A. M. one of the twins' sons, who slept up stairs, heard a cry of alarm, and he went to the twins' sleeping-room. Eng was found greatly excited, his brother Chang having died during the night. He grew gradually worse, remarking, "I suppose I must die too." In two hours he expired. The family physician, Dr. James Hollinsworth, after the death of the twins, desired to examine the bodies, but was not allowed. Professor Pancoast, of the Jefferson Medical College, requested Mayor Stokley, of this city, to telegraph to the Mayor of Greensboro, asking an examination in the interests of science. Our readers will be made acquainted with the results hereafter.—*Med. and Surg. Rep.*————*The U. S. Navy.*—Surgeon-General Beale,

of the Navy Department, has written a letter to Senator Cragin, stating that any reduction of the appropriation for the Medical Bureau is possible "only at the expense of the sick and disabled officers and seamen." He says the Naval Hospital Fund, contributed by seamen and officers, is no longer sufficient to maintain the hospitals, and an appropriation of $50,000 is asked to make good the deficiency.—*Ex.*———*The National Sanitary Convention.*—This body met at Washington, January 20th, and Dr. A. W. Boardman, of Boston, was elected President. On the succeeding day only eleven delegates were present, but the proceedings were enlivened by Dr. Mary Walker taking part in the discussion on the adoption of a constitution.—*Ex.*———Dr. George a Christian was convicted, in Washington, of having "resurrected" dead bodies for the purpose of selling them.—*Ex.*———Among the newest of Boston's many institutions, is the Ladies' Physiological Institute. The design of the Institute is to extend physiological information among women, and teach them the laws of health and life.—*Ex.*——— Private letters from the Gold Coast report that great sickness prevails among the troops of Sir Garnet Wolsley, proving fatal in many cases within a few hours after the attack.—*Ex.*——— A physician, speaking of a patient who was prostrated by illness, remarked, "he can hardly recover, since his constitution is all gone." "If his constitution is all gone," said a bystander, "I do not see how he lives at all." "Oh!" responded the ready son of Esculapius, "he lives on the by-laws."—*Ex.* This patient must have been chairman of a committee on medical ethics.—E. S. G.———The accident crop of the Ohio railroads during the year ending on the 30th of June amounted to 200 killed and 398 wounded.—*Ex.*———A death from hæmorrhage, consequent upon rupture of the Fallopian tube, is reported by Dr. J. B. M. Miller. It occurred in a robust, healthy colored woman, twenty-six years old; it was thought to be dependent upon extra-uterine fœtation.—*Ex.*———*Cholera in Poland.*—From the beginning of the recent outbreak of cholera up to the middle of October, the total number of cases

in Russian Poland amounted to 55,477, of which 26,234 were fatal. In Warsaw alone, there occurred during this period, 4,933 cases, 1,887 proving fatal.—*Ex.*———*Appointment.*—Dr. H. Knapp has been appointed ophthalmic surgeon to the Charity Hospital, New York, *vice* Dr. H. D. Noyes, resigned.—*Ex.*——— *Arsenical Paper Hangings.*—Arsenic occurs not only in the bright green papers, but also, occasionally, in the white or cream-colored enamel papers, so frequently used for drawing-rooms, and in drab papers tinted native ochre.——— A quarterly, entitled "The Chicago Journal of Nervous and Mental Disease," edited by Drs. J. S. Jewell and H. M. Bannister, is announced. It is designed to make it a scientific, yet thoroughly practical journal, treating of the special department indicated by its title.—*Exchange.* May the editors find both pleasure and profit in their work.—E. S. G.———Dr. William Warren Greene, of Portland, has resigned the chair of Surgery at Long Island College Hospital. We are happy to hear that he has recovered from his severe illness and has resumed his practice.—*Med and Surg. Jour.*———Dr. Henry Fuller has recently died in London at the advanced age of fifty-three. He will be best remembered in medicine for his inquiry into the use of alkalies in rheumatism, and he was an ardent advocate of their employment in sufficiently large doses in this disease.—*Med. and Surg. Journal.* ——— *Cholera in Hungary.*—The "Lancet" states that the epidemic of cholera in Hungary, from its beginning in 1872 to its close in 1873, is said to have attacked not less than 433,000 persons, and of these killed 183,000.—*Med. and Surg. Jour.*———*Artificial Elongation of the Clitoris*—Among some of the negro tribes of Western Africa the strange fashion exists of artificially elongating the clitoris by means of small weights appended to it, and the organ is thus gradually increased in size, until it becomes lengthened in size several inches. This result is considered ornamental.—*Med. and Surg. Jour.*

EDITORIAL.

"Nullius addictus jurare in verba magistri."—Hor.

NEXT PRESIDENT OF THE AMERICAN MEDICAL ASSOCIATION.—The "Peninsular Journal of Medicine" wishes to know what member of the Medical Profession of Michigan will be "put forward, in case the Association tenders the usual compliment of electing its President from the State in which it (the Association) convenes." This "usual compliment" is not tendered by the Association; and it should never be. If the President is elected from the State in which the Association meets, all invitations given by State delegations hereafter will be regarded with just suspicion, as a mere effort to secure for some prominent member of that State's delegation this prominent office; the hospitality of the State would be stained with the suspicion of interested motives. In State Associations, the whole aspect of this matter is different. Providing for the meeting of a State Society involves severe labor, responsibility, and expense; in addition to this, each portion of a State should be, in its turn, the arena for such meetings. This stimulates the formation of local, county, and district associations, and divides the labor and expense attendant upon meetings equally among the Medical Staff of the State. Apart, however, from these differences, the National Association does not tender the compliment alleged by the "Peninsular Journal." In 1868, it met at Washington and elected Baldwin, of Alabama; in 1869, it met at New Orleans and elected Mendenhall, of Ohio; in 1870, it met at Washington and elected Stillé, of Pennsylvania; in 1871, it met at San Francisco and elected Yandell, of Kentucky; in 1872, it met at Philadelphia and elected Logan, of California; in 1873, it met at St. Louis and elected Toner, of the District of Columbia. It is thus demonstrated that in not a single one of these instances has the Association elected its next President from the State in which the Association then assembled. The distinguished physicians of Michigan must not expect such a result;

neither custom nor justice can give them such an honor in 1874. In the past six sessions of this Body, the South has had but two Presidents; Baldwin and Yandell. It ought certainly to enjoy this honor at the meeting in 1874.

AN OLD DELUSION ABANDONED.—It has long been supposed, that "the Hub" (Boston) was the centre of all which is distinguished in the arts; in science; and in education; but this delusion is, naturally enough, being abandoned. If any one will read the first editorial in the "Boston Medical and Surgical Journal" for January, 1874, (page 20), he will at once see that the medical portion of the Hub abandons all pretensions to grammatical construction. The editors therein allude to themselves in such a confused and amusing manner, that one is at a loss to understand how such a piece of composition could have been either constructed or published at this great educational centre!!! "The editors" speak of "their efforts"; "their thanks" for the support given "them," etc., and just as one settles himself down to a full understanding of their elegantly writing in the third person plural, he is astonished with what is added in the next paragraphs, and reads with amusement of what is said in regard to "our views"; what "we trust," and what "we shall make," and what "we shall endeavor to tell" as "we see it," etc. After these horrid lapses, the editorial closes thus: "We look confidently to the Profession for support." Now, the Profession will justly support this valuable old journal, but they can not "support" the grammar of its editors; they can not do this; it is asking too much. That famous editorial is dated January 1st; New Year's Day; this, charitably, may be the solution of the difficulty. With this and other grammatical eccentricities noticed, one is justified in saying of the past estimate of the Hub, that it is an Old Delusion Abandoned. a little far-fetched F.W.D.

"CHICAGO MEDICAL EXAMINER," ETC.—The editors of this excellent and sterling journal will please accept the thanks of the

editor of the "Richmond and Louisville Medical Journal" for the handsomely-bound copy of the "Examiner" sent to him. ———An amusing little episode in the life of the "Cincinnati Clinic" is an editorial from its editor, in which he scouts and repudiates the publication of advertisements as objectionable, etc., and in the very next issue republishes his advertisements; merely to afford the journal "a cover"!! The cover would not be complete, of course, without the advertisements. The editor makes a great error; advertisements are a great advantage to a journal when they are of a proper character; they afford most useful information to the Profession; the income derived enables the editor to improve his journal; and lastly, they make, at times, a "cover."

Dr. A. B. Palmer, of Ann Arbor, Michigan.—The attention of this Journal has been directed by the "Adrian (Mich.) Times," and by other missives, to the most wonderful coïncidences of thought and expression existing in a lecture delivered by Professor Palmer, of Ann Arbor, before the Michigan State Medical Society in June last, and a work published by Joseph John Murphy, of England, in 1869. These coïncidences are certainly wonderful indeed. Byron's "Dream," Campbell's "Last Man," and Coleridge's "Ancient Mariner," abound in psychological coïncidences. The expression "like angel's visits, few and far between," contemporaneously used by so many poets having no communication with each other was a most wonderful coïncidence; these and many other classic coïncidences of thought and diction are familiar to the students of English literature. There are none, however, so frequent and so wonderful, as those occurring in the works of the medical Michigander and the erudite Englishman. These are indeed fit subjects for deep psychological study, and manifest a rapidity of mental intercommunicatlon transcending the marvels of sub-marine telegraphy. Were Mr. Murphy dead before Dr. Palmer wrote, all persons with the evidences submitted to them would become helpless converts to the mystic doctrines of metempsychosis;

but as Mr. Murphy is not dead, each bewildered reader, when confounded with such psychological mysteries, takes refuge under the all-comforting, and not unfamiliar dogma, that "there's nothing new under the sun." The Brain! the human Brain! What a wonderful organ!! Man is constantly heralding its triumphs, claiming for each of these originality and independence! Yet, he has but to turn back to the records of the dead to learn the emptiness of his claim! Modern civilization boasts of her triumphs and her progress, but only when the courses of her thought are unillumined by the light of history. The pre-historic Egyptian and the buried denizens of Herculaneum offered in their marts the same brilliantly-colored glass, and the same beautifully decorated pottery, which unblushing assumption at the present time claims as evidences of discovery and progress in modern art. Alas! it is all old, and this depressing lesson will only be learned when unceasingly taught by the relentless testimony of experience. Egypt has offered its lesson. Herculaneum has offered hers. It is reserved next for the little town of Ann Arbor to offer also its depressing testimony. The glories of the lecture of Professor Palmer have all previously shone in the illuminated pages of that renowned Englishman, rejoicing in the classic name of Murphy!!

Dr. S. W. Butler.—The Profession of this country will be pained to learn of the death of Dr. S. W. Butler, of Philadelphia, Pa. As the founder, editor and proprietor of the "Medical and Surgical Reporter," he is widely known. He also originated the "Half-Yearly Compendium of Medical Science." As an energetic business man, he had few superiors. Not a scientific man, he yet successfully conducted and founded two large medical periodicals. His loss will be severely felt. He died of pulmonary phthisis January 6, 1874. His associate editor, Dr. D. G. Brinton, takes charge of the journals above mentioned. With a practical experience of many years, and a special aptitude for his work, it is believed that he will conduct the "Reporter" and "Compendium" with efficiency and entire

satisfaction. It is hoped that he may find pleasure and profit in his work.

BREVITIES.

Registration Law.—After great labor, Dr. S. A. Foss, of Lacona, has induced the Kentucky State Legislature to enact a law providing for the registration of births, marriages and deaths. This law will be inoperative, it seems, as there is no provision made for a registrar. The wedge, however, has been introduced, and it is hoped that the knotty and unyielding Body of State Legislation will in another year be welcomly opened, and afford a triumphant fruition of the labors expended upon it.———*Alabama State Medical Association.*—It seems that this Journal did this Body of Physicians injustice, in virtually quoting from an Alabama newspaper the account of their festive supper. The amende is cheerfully, fully and publicly made. The meeting, as reliably reported recently to this Journal, was decorous, dignified, and efficient. May it be thus always.———*Archives of Electrology and Neurology.*—A Journal with this title is to be soon issued by Dr. George M. Beard, of New York. It is hoped that he may succeed in his difficult and unpromising undertaking.———*A Rare Opportunity.*—Complete files of this Journal from January 1869 to 1874 have been obtained, and are now for sale at this office. Price, $5 for every twelve numbers.———Wanted, copies of this Journal for May, July, and November, 1873. For each copy sent, fifty cents will be returned by mail.———The Kentucky State Medical Society meets at Shelbyville on the first Tuesday in April. It is to be hoped that there will be a large and useful meeting. ———*The Lithomelder.*—This is the title of a little pamphlet largely sent to physicians. It is issued by some one calling himself W. A. Dudley, M. D., of Petersburg, Va. He proposes by a secret method of his own to use "a captivator, whereby calculi may be inveigled into a bag"; and if the stupid and refractory body refuses to be thus "captivated," there is a secret means adopted for dissolving it. Dudley proposes to do with a

calculus as Cromwell did with the British Parliament; to try and captivate it first, and failing in this, then to dissolve it. This exposure will, it is hoped, be sufficient to prevent the unwary from trying to have their calculi "captivated." *Verbum Sat Sapienti.*———*Generous, Noble, and Just.*—A few weeks since the Faculty of the Louisville Medical College offered to the City Council to attend gratuitously the whole out-door sick poor of the city, if an out-door Dispensary Building (much needed, as stated by the Hospital Staff) were furnished and the Faculty permitted to use a portion of it for didactic purposes. Immediately afterwards there appeared a so-called Report (in the secular newspapers here) of the University Dispensary. The Report is signed by Edward Palmer, M. D., and is addressed to a prominent attorney, who is President of the Board of Trustees of the Medical Department of the University of Louisville. This is the first public "report" ever made by the present incumbents. Its object is as transparent, as flimsy, and as fragile, as "the web in the leaves the spider weaves," when this handsome little insect wishes to deceive and prey upon the unwary. In the Report it is stated, that this Dispensary needs no aid, and desires none; more than this, that it gives $100 per month in medicines to the sick, etc. The familiar child's picture of the good Samaritan (in scarlet jacket and flaming yellow breeches) pouring out oil and wine in behalf of the fallen traveller by the wayside, with the placid ass as the only witness to the transaction, is not in philanthropic effect to be compared with that sketched by Dr. Palmer in regard to himself and his colleagues. Their good deeds, too, superior to that of the Samaritan, have been nobly concealed until the present time, when the odor of them arises as a truly sweet-smelling savor; like the aroma of old wine which has for years been unregarded, and in obscurity. It is a sad office to blow away this sweet and intoxicating cloud, but the journalist must, like the player, be, as Hamlet states, "an abstract and brief chronicler of the times." There could be nothing more absurd than the statement made by this Dispensary Staff, of not needing aid and

not wanting any. The Dispensary stands on grounds owned by the tax-payers, and loaned to the present incumbents; these are chiefly members of the Faculty of the Medical Department of the University of Louisville; this University stands also on ground owned by the tax-payers; it was built by them; it was equipped by them, and the present Faculty are absolute pensioners upon the bounty of the Public; they and their predecessors have been pensioners for thirty years. They receive an annual pension now from the tax-payers, amounting in equivalents to at least $5,000; for the facilities annually given them by the city of Louisville, are fully equal to this amount. How absurd, incorrect, and unwise it is, then, for Dr. Palmer and his associates claiming to be independent of the Louisville Public. Here is a picture of eight interesting lambs, with their noses chronically buried in the municipal udder; with their mouths streaming with municipal milk; with their exposed bodies, fat and sleek with the food pensioned out to them for years; yet these municipally-fed and fattened, innocent creatures are now putting on airs; pretending to be independent and self-sustaining. The whole claim is a bare-faced sham, of which all concerned ought to be ashamed. The object of the Report is to defeat the efforts of an honorably competing Institution (which has never received a dollar's aid) from succeeding in the effort now being made to obtain a portion of a building, in return for gratuitously attending the outdoor sick poor of Louisville. The Louisville Medical College offers a full *quid pro quo;* it has been built up independently, and is not indebted to the Public here for the aid of a cent. The other College is owned by the tax-payers; was built by them; equipped by them; has been nursed by them for thirty years; and to the extent of $5,000 a year is now sustained by them. What does it do in return for this? What has it done for years but receive its pension and struggle for existence? When those who have so long been fed by the Public pretend to be independent and act as they have recently done, and are now doing, they must receive what they deserve. It is, however, superla-

tively amusing for those who have been and are now occupying free of rent city property, to be so stupid as to state that they need no aid. Why, if the aid now enjoyed were taken away, they would go to the bottom, like lead detached from the cord sustaining it. Thus ungrateful, if not fit recipients of the city's bounty, they are, at least in the language of Lorenzo, "fit—for stratagems and spoils." "The spoils" they may have, for they need them; but "the stratagem" recently attempted shall not go unexposed. No one expects generosity or magnanimity in this connection; but all expect competitors to be above resorting to so shallow and transparent a trick. That wonderful Report is certainly *Noble, Generous, and Just.*

NOTICE.

There is nothing more mortifying and painful in the management of any Publication than the receipt of communications, stating in reply to "bills" sent out, that a receipt for the amount claimed is already in possession of the writer. This unavoidable trial and trouble, springing from errors, necessarily occurs in the business of all men, and certainly in the office of every Publication. Some of the subscribers to this Medical Journal (indeed, many of them) appreciate the fact, that an editor, a teacher, the Dean of a large College, a physician, the representative of a correspondence exceeding 6,000 letters annually, and the proprietor of a large work, must be too busy to keep his own Ledgers, though responsible for their accuracy; they appreciate the fact that in his business, as well as in theirs, errors may actually occur, even though strenuous efforts are made to conduct such business justly and accurately; they appreciate the fact, when complaints are to be made in regard to any inaccuracy of accounts, that such complaints can be made with courtesy and generosity, as well as with justice and propriety. There are others, however, who, "thanking God that they are not as other men are," in making errors, etc., never lose the opportunity of being rude, coarse, and offensive, if accounts already paid be by mistake sent to them. An editor has of course to deal with both of these classes; those who are gentlemen always, and those who are gentlemen only occasionally. To both of these classes it is best to say, that the Books of this Journal are kept by gentlemen of unblemished habits and character. Their accounts are very seldom wrong, and when wrong, it gives them pleasure to correct them.

All future errors, it is hoped, will not only be reported, but reported promptly. Subscribers are earnestly asked to do this. Such communications will always meet with prompt and cheerful attention.

THE RICHMOND AND LOUISVILLE

MEDICAL JOURNAL.

VOL. XVII. MARCH, 1874. No. 3.

ORIGINAL COMMUNICATIONS.

"Qui docet discit."

ART. I.—IGNEOUS AGENCY IN THE PRODUCTION OF DISEASE. [Read before the Medico-Chirurgical Society of Louisville, Ky., and sent by that Society for Publication to this Journal.] By DUFF CHILD, M. D., Louisville, Ky.

"Many would banish from medicine all theory, all system, and preserve only the facts and results of experience. * * * * * * In fact, I may say, without a theory, without some systematic arrangement of partial opinions that tend towards a common end, there exists no science."—"Renouard's History of Medicine."

It is but proper for me to state at the outset, that I use the term "Igneous Agency" in a geological sense; and I hope to give in this writing some good reasons for my belief that subterranean heat, the existence of which is made manifest to us by the volcano and the earthquake, may be a disease-producing power of fearful consequence; and yet which seems, strangely enough, to have been little thought of in such relation by those whose province it has been to thoroughly investigate subjects in pathogeny.

It is not necessary here to even allude to the different hypotheses which have, from time to time, been advanced by learned men to account for the igneous state of large underground districts; suffice it to say, all their theories are regarded as being insufficient. The interest to us attaches only to the fact that intense subterranean heat exists, and that it extends itself, possibly from the centre of the earth, apparently in lines or belts under the greater portion of the habitable surface of the globe. With this one fact established, we have but to glance at the almost interminable list of chemical compounds which are made by the simple application of heat to elementary bodies, in contact either with each other or with organic matters, to be inclined to the belief that the surface of the earth above and contiguous to these igneous districts must at times exhale some of the most fatal poisons with which we are acquainted.

But this need not be a matter of inference alone, since there is record of numerous instances of the destruction of animal life by the imperceptible escape of poisonous vapors from the soil, and from the surface of lakes in many volcanic countries. As a familiar example, I may mention the insalubrity of the classic lake Avernus and its immediate neighborhood. This body of water probably occupies the crater of an extinct volcano, and is described as follows: "It is circular, in some places 180 feet deep, and surrounded by hills of a moderate height, which used to be covered with immense woods, so that gloom and darkness surrounded the lake, and accumulated effluvia filled the air with contagion. These woods no longer stand, but the regions about the lake are still unhealthy."

Allusion to the former unhealthiness of the neighborhood of this spot is also made by Sir Charles Lyell in one of his chapters on volcanoes.

Lake Quilotoa of Quito, South America, also probably of volcanic origin, is likewise noted for the noxious vapors arising from its surface and vicinity.

But another and more marked instance of poison emanating

from the soil of a volcanic locality is that of the valley called Guevo Upas, in the island of Java, wherein, we are told, neither man nor any other animal can live. Sir Charles Lyell thus writes of it: "There is an extinct crater near Batur called Guevo Upas or the Valley of Poison, about half a mile in circumference, which is justly an object of terror to the inhabitants of the country. Every living being which penetrates into this valley falls down dead, and the soil is covered with the carcasses of tigers, deer, birds, and even the bones of men, all killed by the abundant emanations of carbonic acid gas, by which the bottom of the valley is filled." This authority does not state, however, how it was possible to ascertain that the poisonous emanation was *altogether* carbonic acid gas; for, you will notice, he says, "every living being which penetrates into this valley falls down dead." No doubt carbonic acid gas escapes from the bottom of this valley, but it ought not to prove so poisonous when disengaged in the open air. It is quite probable that a more exact analysis, than, as it seems to me, it was possible to make under the circumstances, would show the presence of a vapor far more deadly than carbonic acid gas.

Again, in the island of Lancerote, one of the Canaries, an island which, I believe, was finally destroyed, the cattle all perished once owing to exhalations from the ground, after the island had been agitated by volcanic convulsions.

But as an instance of the probable pathogenetic agency of subterranean heat, I have felt the deepest interest in the account of the mortality from sickness which followed the earthquakes throughout Calabria during the year 1783 and the three succeeding years. Sir John Herschel says on this subject: "Altogether about 40,000 people perished by earthquakes, and some 20,000 more of the epidemic diseases produced by want and the effluvia of the dead bodies." Now, of the character of the epidemic diseases caused, as Herschel states, "by want and the effluvia of dead bodies," I have been unable to find anything definite in the several accounts I have examined of that

terrible calamity to Calabria; certain it is, however, that want and *effluvia of dead bodies* are not regarded in modern medical science as sufficient causes to account for the prevalence of any of the epidemic diseases (excepting possibly typhus fever) which are met with at the present day. I am more persuaded to believe that the gaseous emanations from the soil and the poison in the waters of the country due to the action of underground heat on various inorganic and organic materials, were active factors in the production of much of the disease that prevailed.

Finally, under this head I will give a quotation or two from an account of volcanic eruptions in Iceland. "In 1783 an eruption from Mount Skeidera covered with lava some of the best districts of the island; the clouds of ashes impregnated the air with noxious particles; the waters were corrupted, the fish driven from the coasts, and famine and pestilence ensued. In the same account we read: "Pestilential airs have been known to issue from particular spots in plains during volcanic eruptions which have destroyed all who approached."

The foregoing citations will, I know, be regarded by those who have read what I have thus far written, as specious pleas in behalf of ideas that have no real foundation in fact; for, they will argue, "we already know what are the poisonous vapors and compounds made within and thrown out by volcanoes in a state of eruption, and we know what escapes through fissures—some vomiting flame, vapors and fluids—which are torn in the earth's surface where earthquakes prevail"; they will contend, "we know that muriatic acid, chlorine gas, carbonic acid gas, nitrogen, sulphuretted hydrogen, sulphurous and sulphuric acids and salts of potassium, calcium, iron, copper, cobalt are frequently ejected; we are thoroughly acquainted with the properties of what escapes from these safety-valves of the earth; and, although poisonous, we know that none of them are capable of causing either epidemic or endemic diseases." Such would probably be the argument confidently urged, and I could even grant its truth, though it claims altogether too much, and yet declare with good reason that but little is known of the matter.

Let me now give some proof that my declaration is probably true. Not a great many years ago the following observation was made, which seems to have been a surprise to the chemists: "In some of the iron furnaces of Scotland, where raw coal is useful for fuel with the hot blast, a saline-looking substance is occasionally observed to issue in a fused state from the tuyere holes of the furnace and concrete on the outside. This proved on examination by Dr. Clark to be principally potassium cyanide."

Now, it requires no effort of the imagination to see in a burning volcano an immense natural blast furnace, the heat of which is higher, probably, than any degree that can be reached by artificial means. Within this furnace are frequently tons of iron ore and other metals and carboniferous matter almost without limit, also nitrogen—all the conditions necessary to the forming of potassium cyanide, as in the iron furnaces of Scotland, and on an awfully grand scale. That the fearful poison just mentioned is not enumerated among the products of volcanic action must be due either to the fact that it has not been looked for, or owing to the presence of much watery vapor during eruptions, the cyanide is decomposed, giving off instead the deadly vapor of prussic acid and leaving the base of the compound deposited with the lava in the form of some other potassium salt.

Next, take for reflection another remarkable and significant fact. We will find it stated in any work on mineralogy that a compound containing sulphur and *arsenic*, called orpiment, is found in the volcanic matters of Ætna, Vesuvius, and Guadaloupe. Here it will be readily seen is positive proof that subterranean heat disturbs a fatal poison in its bed deep in the bowels of the earth, and by heating it in its metallic state, as well as when in the form of arsenious acid, causes it to sublime and combine with fuming sulphur or sulphuretted hydrogen, commonly present, and thus form the sulphuret of arsenic, which is found in the lavas of certain burning mountains.

Again, concerning Iceland, an island whose entire underground is within the igneous influence, we may read as follows:

"Mineral springs of many kinds, and every temperature are found; some highly impregnated with carbonic acid gas, and called by the people *ale springs*, having, it is said, the power of inebriating." From this remarkable instance of the production of an alcohol* in this immense subterranean laboratory and distillery, we are justified in concluding that many equally as complex compounds as alcohol are frequently formed by the same agency.

Then as a final fact upon which to begin to build my hypothesis, I will remind the reader that two metals, copper and zinc, when highly heated, as they are when brass is manufactured, give off a product that has the power of causing a self-prolonging disease. This I mention only as an instance of a disease producing material evolved by the fusing of two elementary bodies. A like process can be and no doubt is frequently conducted by nature under the ground; and as an instance somewhat in this connection, I wish to make a quotation from an article in Popular Science Monthly, Sept., 1872, as follows: "Perhaps it may be as well here to correct the common mistake as to the nature of the yellow substance found about the craters (Vesuvius), whose brilliant colors remind one so much of the solfatara. This substance is not sulphur, but copper."

By giving the foregoing facts their proper weight, I think it will not be possible to escape the conclusion that we not only know little, judging from the statements made in works on geology, of what underground heat may produce, but that it is quite possible by its agency, by its disturbing as well as by its heating power, any one of the deadly compounds classed as organo-metallic, and many others of a different class, may be often created and placed in such position as to reach man and affect his well-being through the water he drinks, as well as by means of the air he breathes; and this hurtful influence may be exerted not immediately at hand to the vents of this subterranean power, but probably at hundreds and even thousands of

* Formed possibly by the union of ethene (oléfiant gas) with the elements of water.

miles away. Among the many poisons that could thus be generated and distributed, I may mention the compounds of arsenic, such as cacodyl and its derivatives; arseniuretted hydrogen; the salts of antimony, some of the stibines, the phosphines and the vapors and salts of various poisonous metals.

Above I have spoken of the disturbing, I ought possibly to have said displacing power of the underground igneous force as probably being auxiliary to the formation of the poisons I have enumerated. Now this displacing power is efficient by bringing substances, in suitable form to admit of their ready combination, in contact or proximity to each other; say in the form of vapor or in solution or in molten shape. In such diffusible condition volcanic matter highly heated and both poisonous and generating poisons, can be and unquestionably is injected violently along and through the looser and fractured strata of the earth's crust, the currents coming to the surface here and there unexpectedly, or spending themselves too deep underground or with too little force to render their presence perceptible to the inhabitants of places immediately above where they passed or the point where they stopped; and though lying unsuspected under districts of country, under cities and villages, yet reaching them by gradual diffusion through the overlying soils or in the springs that supply their wells and fountains. The phenomena of earthquakes prove that this supposition is entirely allowable; I mean, in so far as the movements of igneous currents are concerned.

As an illustration to the foregoing, I will quote a passage from "Lyell's Principles of Geology," which is intended to explain how earthquakes, and even volcanoes, are frequently produced. The remarks relate to liquid gases, and are as follows: "If a tube, whether of glass or other materials, filled with condensed gas have its temperature slightly raised it will often burst; for a slight increment of heat causes the elasticity of the gas to increase in a very high ratio. We have only to suppose certain rocks permeated by these liquid gases (as porous strata are sometimes filled with water) to have their tempera-

tures raised some hundred degrees and we obtain a power capable of lifting superincumbent masses of almost any conceivable thickness, while if the depth at which the gas is confined be great, there is no reason to suppose that any other appearance would be witnessed by the inhabitants of the surface than vibratory movements and rents from which no vapor might escape. In making their way through fissures a very few miles only in length or in forcing a passage through soft yielding strata, the vapors may be cooled and absorbed by water. For water has a strong affinity for several of the gases, and will absorb large quantities with very slight increase of volume. In this manner the heat or the volume of springs may be augmented and their mineral properties made to vary."

As a further illustration, I will call attention to an actual occurrence. In 1812 a suppressed convulsion came near breaking through in the United States at Charleston, S. C.; did crack the surface at New Madrid, Mo., and showed its near approach under the Mississippi Valley from the mouth of the Ohio river southward to that of the St. Francis, in Arkansas, a distance of 300 miles, then disappeared, to show itself again in the terrible earthquake at Caraccas, in South America. Now this pent up power, from whatever source it might have come, must have been exerted underneath the surface of all the land and water between Charleston, South Carolina, on the east and north, New Madrid, Mo., on the west and north, and Caraccas on the south.

Having by what has gone before attempted to make clear my ideas of the means and manner by which igneous force, pent up beneath the earth's surface, may become an agent in the production and diffusion of poisonous matters, I will next proceed to apply my hypothesis to the explanation of the history of the progress of two fearful epidemic diseases, which from time to time pass over vast districts of the world's surface; apparently controlled in their propagation by no action of man nor obstructed in their progress by any barriers erected by him. I allude to the diseases, epidemic cholera and yellow fever.

However, before proceeding with the notice of those maladies, I wish to remind the reader that all the symptoms, and, so far as I can ascertain, the post-mortem appearances found in human beings killed by cholera are sometimes caused by poisoning from salts of antimony and from arsenic; and the Homœopathists say, from copper also. Furthermore, it is said by good authority, that after death from phosphorus poisoning, lesions of the fluids and solids similar to those peculiar to yellow fever are commonly found. But there are certain symptoms which follow poisoning by arsenic that interest me much, and seem to me to point to that metal as being an element in the poison which causes the last-mentioned disease, a poison, probably, of a complex nature. I refer to the peculiar redness of the conjunctiva, to the unusually severe pains in the back and limbs, to the gastro-intestinal symptoms and the constant epigastric tenderness, and, above all, the subsidence of the symptoms in some persons fatally poisoned by arsenic. In illustration of the last-mentioned peculiarity, I will quote from Dr. Christison's work on poisons. He says: "In some cases of the kind now under consideration a short remission or even total intermission of all the symptoms has been witnessed, particularly when death has been retarded till the close of the second or third day. The remission which is accompanied with dozing stupor is most generally observed about the beginning of the second day. It is merely temporary, the symptoms speedily returning with equal or increased violence. Sometimes the remission occurs oftener than once, as in a case related in a London medical journal. The patient, a child seven years old, lived thirty-six hours in a state of alternate calm and excitement; and during the state of calm no pulse was to be felt at the wrists. So far as at present appears a long intermission is impossible."

Now, we know that the elements—antimony, arsenic, copper, phosphorus, etc., are widely disseminated through the earth; and we know further, that they, in their numerous chemical combinations, form other even more poisonous substances than were the original poisons; but, what symptoms would

attend the entrance of these new noxious compounds, say in small quantity, into the bodies of multitudes of men, taken in by their drinking water or their breath, we, I may say, know nothing. We know only the effects of their simples on animal life by the result in a few individuals; can, therefore, arrive at no conclusion, save by analogy, as to what would be the consequence if large populations were subjected to their influence; and in reaching such conclusion we would have to make large allowance for that peculiarity of the human organism, not understood but named sometimes predisposition, at other times, aptitude, and at others still, idiosyncrasy. By giving this human peculiarity its proper importance as a disease-controlling element, we can readily account for the fact that only the minority of those exposed to morbid poisons, or I would say to any poison in moderate quantity, suffer from their effects.

It is scarcely necessary for me to assert here what I have elsewhere intimated; namely, that the elementary poisons, which we have just now enumerated, lie in such geological position as to render them liable to be acted on by subterranean heat currents. It will be remembered that I called attention to the fact that arsenic in the form of a sulphuret, appears in the lava of Ætna, Vesuvius, and Guadaloupe.

Let me now briefly consider the two diseases, the history of whose progress over the earth I shall attempt to explain by my hypothesis of their cause; and I will here state, I believe that cause to be some one or more of the organo-metallic or organic poisons of which I have already written so much.

Epidemic cholera or Asiatic cholera, as it is frequently styled, became, it is well known, a disease of the greatest interest to the medical profession of the civilized world between the years 1817 and 1836, during which period it extended its ravages from the Province of Bengal, in Hindoostan, throughout the greater portion of the inhabited districts of the earth; but confined its path between certain parallels of latitude. This seeming peregrination of cholera was not, however, its first appearance outside of the country which has been regarded as its birth-place;

for as far back in time as we have any reliable records of epidemic diseases, there is occasional mention of a disorder passing through Europe with symptoms similar to those which belong to Asiatic cholera. Since the period included by the dates 1817 and 1836, it has several times gone over the same way it then took around the world.

In relation to the memorable outbreak in 1817 at Jessore, in Bengal, Dr. Graves, of Dublin, in an essay in which he gives many strong arguments to prove the contagiousness of cholera, says: "It was in the spring that the cholera of India assumed a new and more powerful character; it was then that it became endowed with properties that rendered its extension steadily progressive over the earth in spite of all obstacles (?) interposed by diversity of soil and climate."

The disease with the "*new and more powerful character*" in the beginning of its spread over the world, went up the river Ganges, westward; went southward, down the eastern coast of Hindoostan; reached Ceylon and spanned the Indian Ocean to reach Mauritius and Bourbon; thence, singular to relate, it traveled no further southward, though a stream of humaan travel and commerce to all nations of the world passed from India, where the disease raged, around the Cape of Good Hope, touching at that point, and yet left no contagion there. It is said by Dr. Graves that a strict quarantine kept off the disease at Cape Town and other points in that section of Africa. He does not, however, explain why it was that the great city, Mooshedabad, in Hindoostan, surrounded by cholera and without quarantine, escaped the pestilence. In his essay on the "Origin and Progress of Cholera," he thus writes of that city: "The large and populous city, Mooshedabad, which from extent and local position was apparently favorably circumstanced for the attacks of the epidemic, it is remarkable, escaped with comparatively little loss, while all around was severely scourged." Neither does Dr. Graves, nor any other authority, explain why this same epidemic broke through many quarantines.

The plague went from what seemed to be its centre of diffusion eastward as well as southward and westward. In its progress to the east it traversed the large islands of the Indian Ocean—Sumatra, Java—the peninsular of Malacca and the country just north of it; went as far east as the Molucca islands, stopping short of Australia near at hand. It then spread northward over the islands of Japan, over China, Tartary and the remainder of Central Asia. From this extended easterm limit it spread northwest and west, toward Western Asia and Europe, including in its district Arabia and the northern portion of Africa; passed through Europe and portions of North America. Of the progress of the disease beyond the last-mentioned continent, westward, I know nothing.

By examining the limits of the broad girdle this epidemic made around the world from east to west, we will find that the northern border or boundary of the girdle tended west, northwest; and, in its course through Europe, extended in the direction of a line drawn from Orenburg, Russia, through Sweden towards Iceland, but broke away toward the southwest before reaching that island, and struck the coast of North America at the St. Lawrence river. The southern boundary of this track could be described by a line tending also west, northwest, from Amboyna, one of the Molucca islands, through Ceylon, thence due west through Northern Africa, the Caribbean Sea, and Southern Mexico; but showing, in the first part of its course, a remarkable projection toward the islands of Mauritius and Bourbon, and to the neighboring coast of Africa.

By tracing the above boundaries on the map, we will see that the cholera zone around the world, up to 1840, beginning along the eastern coast of Asia and the islands to the southeast, extended, at this eastern limit, between 35° N. and 10° S. latitude; on the 10th meridian, east from Greenwich, it reached from about 65° N. to 30° North latitude; and in North America it was included by the 50th and 20th parallel of north latitude. But at the present time the southern boundary of this zone shows another remarkable projection at its western ex-

tremity, as in the case of Mauritius and Bourbon on the eastern, which projection has only recently discovered itself. I allude to the appearance of cholera at the junction of the Parana and the Paraguay rivers in the year 1866, of which such an excellet account is given by Dr. Estrazulas, in the "American Journal of the Medical Sciences," July, 1873.

From this South American locality the epidemic influence, whatever its nature, seemed to spread gradually along the Parana and La Plata rivers and across the continent to its western shores and northward. This is said to have been the first appearance of the disease in this part of South America, but it is quite possible that when the medical annals of South America (if there are any) have been examined as carefully as have those of Europe, it will be known that cholera has, from time to time, visited that portion of the western continent, in the same localities and in the same succession as in the year 1862 at Pernambuco in Brazil, and 1866 in Paraguay.

This recent history of the disease in South America broadens the western extremity of the cholera belt, making it to extend between 50° N. and 35° south latitude.

So the progress of cholera, as we have now traced it, shows that the disease has visited the important countries of the globe, but also shows there are some singular and unexplained omissions in its visitations, if we are to accept as final the doctrine of its transmission throughout the world by human agency.

The omissions I allude to are Australia, the extreme southern part of Africa, and portions of the western coast of that continent, the extreme southeastern portion of the United States, including Florida, Southern Alabama, and Mississippi; and there is no sufficient reason to account for the exemption of those countries from cholera if the disease can be carried by men from place to place.

But, if we were to suppose that the cholera poison is generated by heat acting on various substances deep under the earth's surface, we might then explain the omissions we have noticed.

We, taking this view of the matter, would, I think, be struck with the seeming fact that the cholera area, if I may so allude to the course of the disease over the earth, exactly overlies those parts of the globe that seem to be most under igneous influence, and that the disease does not appear at some spots of the territory overlying and contiguous to this great igneous district is caused, we could argue, by their being underground barriers that prevented the poisonous principle from reaching the surface and impregnating the air and water of the exempt localities. Our supposition as to the source of the disease would, however, enable us to explain the immunity of the extensive countries above-mentioned, by showing that those countries lie outside or beyond (are therefore not affected by) the igneous districts beneath the ground.

Suppose we were to trace on a globe the boundaries of this burning subterranean region, we would find that its eastern border extended from the island of Amboyna or Java, northeastward to the peninsular of Kamtskatka; that the northern limit would be a much curved line, passing from Kamtskatka southwest through the great central volcanic district of Central Asia, then turning northwestward in a straight line from the vicinity of Orenburg, in Russia, toward the *central* volcanoes of Iceland, then southwest to the shores of North America at the mouth of the St. Lawrence river and through Canada, through which country earthquake shocks are frequently felt, and thence on westward to the region of the Columbia river. This point to the west brings the northern boundary of the district we were tracing to the Pacific ocean, and as it is not important to our purpose to include some central volcanoes of that ocean, we will take for our western limit and boundary the wonderful volcanic region extending along the western shores of North and South America, as far south as Chili. Finally, to describe a southern boundary, we would have to retrace the western, say from Chili north to Central America, then go eastward toward Northern Africa, across that continent, including Barbary, to the Red Sea, thence southeast to include Mauritius

and Bourbon, and east again back to Amboyna, the point of starting.

Having now finished the tracing of the cholera and igneous zones from east to west upon the earth's surface, and exhibited their close correspondence to each other, I wish to call attention to what I regard as, at least, a curious coïncidence—viz., that the remarkable volcanic chain that begins at Barren Island, in the Bay of Bengal, and reaches around the south and east coast of Asia and neighboring islands, exactly corresponds in direction and eastern limits to the route the cholera took in 1817, from Bengal toward the southeast and east and northeast. Any one who will take the trouble to examine the map of this district, given in Lyell's Principles of Geology, can satisfy himself of the truth of this statement.

I shall not attempt by my hypothesis to account for certain peculiarities which attend the progress of cholera over the world; as, for instance, its slow movement from place to place, and its frequent pauses on its march, so to speak. I must be content with having tried to attach importance to certain facts; and first, that we know of poisons which will cause in human beings symptoms resembling those of cholera; second, that these poisons may be made into other more powerful poisons; converted into a more diffusible form, and brought by an underground agency toward and upon the surface of the earth and probably placed in such relation to man as to render him liable to be poisoned by them. When the laws which govern the waves of heat that pass in various directions within the earth are determined, then probably it will be easy to explain all the mysterious peculiarities connected with the progress of the terrible epidemic we have been considering. Certain it is, that we know but little of the phenomena of the fearful igneous power in nature imprisoned deep beneath the ground; and, in proof, take the words of a distinguished scientific man of the present time: "We know," says he, "wonderfully little about the origin and mutual dependence of volcanic phenomena. This is due to a want of accurate observations. For the complete

investigation we require first to know at what dates earthquakes and eruptions occur at different parts of the earth."

But, before I leave the subject of epidemic cholera, I wish to say that the prevalence of that disease most frequently during the warm season in districts outside the tropics, may be explained by supposing that the greater pressure of the atmosphere during the winter months in temperate climates, and within the tropics as well, prevents the rising of noxious matters to the surface in those latitudes. This pressure is known to exert a very great influence over the eruptions of certain volcanoes.

In relation to yellow fever, I shall be brief. We know that the countries or country to which it is indigenous overlie portions of two of the most intensely volcanic regions of the world. The centres of this epidemic, if I may so express the idea, seem to be in the West India Islands and the extreme southwestern portion of Europe—the first-mentioned locality possessing many igneous vents, and the second standing over a part of that noted volcanic line or district extending from the Caspian Sea through Southern Italy and terminating, as it is usually stated, at the Azore islands. There is, however, evidence going to show that the igneous regions which the yellow fever centres overlie are connected; for it is recorded that during the great earthquake which destroyed Lisbon in 1755, the waters of the Bay of Carlisle, in Barbadoes, rose twenty feet, and *turned to the blackness of ink*. It is true, the shock of this earthquake was felt at great distances in other directions, but these manifestations were, in most instances, merely the result of conduction of the force of the great shock that overturned Lisbon. That some great epidemic disease did not show itself immediately after this convulsion, and after others of like character, was, to sustain my theory, due probably to the fact that the vapors which was forced about under the ground, and finally found a place of escape at Lisbon, did not disturb and did not contain poisons capable of causing wide-spread sickness; or else the release of these vapors, not in a succession of convulsions, as

in Calabria, but at one grand delivery or explosion, caused them to be thrown into the air, mingled therewith, diluted, and thus rendered harmless; or they were, by the explosion, driven far above the ruined city and borne away by the winds. Though of the medical history of this terrible earthquake I can ascertain nothing whatever.

Now if any sage, whose mind was harassed with searching for causes of epidemic diseases until it found rest in the "*germ hypothesis*" should smile at my wild ideas and explanations, let him compose his features long enough to tell me why it is that the "germs" thrive so at Memphis, Tennessee, for instance, and never at Cincinnati, Ohio, or Louisville, Kentucky, though both cities have exceedingly uncleanly spots in them, and the latter has been, until recently, known to be malarious and unhealthy? And let him tell me why the germs will not allow themselves to be transported from Memphis to either of the two populous cities mentioned; but can be readily taken past them to a point further to the north, to Gallipolis, Ohio, where the *microscopically invisible* eggs hatch out a most destructive epidemic of yellow fever?

It is a significant fact, to my mind, that the *usual* northeastern and northwestern limit of yellow fever in North America is Charleston, S. C., in the one direction, and Memphis, Tenn., in the other; the points about which the great earthquake of 1812, which destroyed Carracas, showed itself on this continent.

To conclude the elucidation of my hypothesis in its relation to both cholera and yellow fever, I will state that it supposes, first, a poison capable of producing the first-mentioned disease to be generated by igneous agency in Southeastern and Eastern Asia, and along the channels by which those volcanic localities communicate, under Asia, Europe and Africa, with the igneous districts of America—the waves of heat, say, moving from east to west; secondly, it supposes a poison capable of causing yellow fever to be generated by the same agency in the West Indies and along the shores of the Caribbean sea and Gulf of

Mexico, also along the Mississippi river and some of its tributaries northward as far as Memphis, Tenn., northeastward to Charleston, S. C., and due east, under the Atlantic ocean, to Spain and Portugal, and occasionally to the western shore of Africa. The theory supposes that the two poisons are generated in and forced along planes from east to west and from west to east, at different depths under the earth's surface; in support of which supposition I would say, that Philadelphia and New York, subject to yellow fever until their water works were perfected, are now exempt from that disease, the one city drawing its water supply from far to the northward through the Schuylkill, the other through the Croton river, also to the northward, neither now using any water, so far as I know, from wells.

Both cities though seem to be still liable to cholera, the cause of which disease, say coming from the east and northeast, passes along the same plane or impregnates the same strata as that in which the rivers rise that supply the abovementioned cities with water. The waters of those rivers become infected, and so all persons drinking the water, who have a predisposition or aptitude or idiosyncrasy as regards the cholera poison, sicken, many dying, the large majority of the population, however, escaping unharmed.

I am aware that the views I have tried to define and defend in this essay may subject me to ridicule; indeed, I expect that or condemnatory silence, yet, with such a prospect ahead, I have not hesitated to put forth my opinion, for I see more reason for believing my hypothesis is correct than for crediting that which ascribes the production of cholera and yellow fever to the entrance into the human body of living organisms. After an immense amount of careful investigation by some of the best microscopists of the world, the "germ hypothesis" has not been established. When the air and water of districts where epidemics of cholera and yellow fever prevail have been carefully examined for organo-metallic and organic poisons, such as I have called attention to, examined by the

aid of the spectroscope and other equally delicate methods of analysis and no poison is found, then I will abandon what will have come to be a chimera, but not till then. I contend that investigation in this direction would be rational, and I believe the result would be highly important.

ART. II.—THE POWER OF INFINITESIMALS IN THE SYSTEM.

By WALTER COLES, M. D., St. Louis, Mo.

Some months since, whilst discussing the subject of homœopathy with an intelligent gentleman of this city—an ardent admirer and believer in its doctrines—he replied to our doubts as to the tenability of the dogmas professedly held by this sect of physicians, by asserting that recent experiments before the French Academy of Sciences had clearly established the proposition of Hahnemann, that drugs were powerful in proportion to their infinitesimal division. This gentleman stated that he had seen an account of these experiments in a literary magazine; that they had been accepted by the Academy as undeniable facts, and that they seemed conclusively confirmatory of the homœopathic doctrine of infinitesimal potentisation. He seemed very much surprised that we had never heard of this before, and evidently regarded us as quite behind the age. Ever since, we have been on the *qui vive* to find out what these experiments were which had vindicated Hahnemannism before so learned and august a body as the French Academy. A few days since we accidentally stumbled on the information sought, whilst looking over some recent works on homœopathy at the Mercantile Library. We were surprised to find that this near claim to a vindication of the power of infinitesimal doses rests upon the interesting experiments of M. Davaine, by which he produced artificial septicæmia and death in a series of smaller animals; such as rabbits, guinea pigs, etc., from a few drops of putrid blood in the first instance, and subsequently by blood

taken from the animals thus killed, which he called "transmitted blood."

We propose to analyze these experiments of Davaine, so that we may understand just what they were, and what they prove, and having done so, to show the unscientific and disingenuous manner in which homœopathy has seized upon a few facts in regard to the morbid tendencies of septicæmia, the virulence of its contagion, and woven them into a pillar of support to the shaky doctrine of infinitesimal therapeutics; a doctrine which is antagonistic to every known law of nature, and to the very intuition of the rational scientific mind.

The object of Davaine's experiments was to show that septicæmia is: First, the results of contagion, or, in other words, that it can be produced by the introduction into the system of an infinitesimally small quantity of putrid virus. Second, that when these minute morbific germs are thus introduced into the circulation, they produce certain changes in the body, long known to pathologists, which we call "fermentation," for lack of a better name, by which the original poison multiplies itself, by converting the whole mass of the tissues and fluids into the same, or similar morbid state as the original germ. These in their turn are capable of acting on other healthy animals, begetting the same condition in them, and so on *ad infinitum*. This is but an illustration in the animal system of what our Saviour refers to when He says, "a little leaven leaveneth the whole lump," and it is possibly from this simile that modern pathologists have applied the term *fermentation* to the morbid process in question.

The following is a synopsis of the report of Davaine, read before the French Academy of Sciences in September, 1872. Of 72 guinea pigs into whose subcutaneous cellular tissue he injected doses of from one to ten drops of putrid blood from the body of an ox, dead ten days, in the month of July, 43 survived and 25 died. He did not succeed in killing a guinea pig with a smaller dose than one-fortieth of a drop. Of 48 rabbits injected with from one to sixteen drops, 22 survived and 26 died. Of nine

others, in which doses of less than a drop were employed, none died from a smaller dose than one two-thousandth of a drop. He found, moreover, that a guinea pig rarely died where the injection was less than one-tenth, or a rabbit where it was under one-hundredth of a drop. But when he employed "transmitted" blood—i. e., blood drawn from one of the animals already killed, he found that death resulted from doses very much more minute than with putrefied blood.

Davaine produced a series of experiments from a rabbit that had died in forty hours from ten drops of putrefied ox blood, as follows: (In each case the injection was made in the back of the neck, and the blood taken from the heart of the animal after death.)

1*st Generation*—With blood taken from the heart of this rabbit twelve hours after death, doses of one, two, three and four drops were injected respectively into four rabbits. They all died in from thirty to forty hours.

These experiments being continued through the second, third and fourth generation, we give the results of the

5*th Generation.*—Three rabbits received, respectively, doses of one, one-tenth and one-hundredth of a drop of blood from a dead animal of the fourth series. They all died within twenty hours.

10*th Generation.*—Three rabbits were inoculated an hour after death from a rabbit of the ninth generation, with doses of one, one ten-thousandth, and one twenty-thousandth of a drop. The first died that same night; the second in fifteen hours, and the third in thirty-five hours.

15*th Generation.*—Three rabbits received, respectively, $\frac{1}{2}0000$, $\frac{1}{3}0000$ and $\frac{1}{4}0000$ of a drop taken from an animal of the preceding series. All died in from twenty to forty hours.

Passing to the 24*th Generation*—Five rabbits were inoculated with blood from a rabbit dead of the hundred-millionth of a drop. The first received a hundred-millionth; second a billionth; third a ten-billionth; fourth a hundred-billionth; fifth a trillionth. All died in less than twenty-four hours.

Finally, at the *25th Generation*—Four rabbits received, respectively, a trillionth, ten-trillionth, hundred-trillionth, and a quadrillionth, from the animal of the preceding series, dead of a trillionth. Only *one* of these died, that receiving the ten-trillionth.

Davaine supposed that he had found a limit to the nocuous properties of transmitted blood, fixing its dilution at a ten-trillionth. Where, as in putrefied blood, he fixed it at $\frac{1}{2}000$. He offers a very plausible explanation of the marked difference between the septic power of putrefied and transmitted blood; holding that putrefaction when progressing for a while outside the body, involves chemical changes, whereby certain noxious properties are *consumed*. So that blood, when permitted to remain in the open air some weeks, passes through the putrefying process and becomes inocuous.

Since Davaine's experiments, Drs. Clementi and Thin, of Vienna, have entered the same field, and whilst their researches confirm the former's, they elicit other interesting and remarkable facts touching the virulence of septic influence. They ascertained that of rabbits inoculated with transmitted blood, 73.9 per cent. died; with putrid blood, 47.8 per cent.; with healthy blood, 15 per cent. (It is well to state that during these experiments, rabbits were dying weekly that had received no injection.)

They learned that one decilligramme of transmitted blood would kill. They remark, however, that "as the dose decreases from the eight-millionth of a centimetre, the rate of mortality begins to decline in a striking manner." (See Dr. Thin's paper, "Edinburg Medical Journal," July, 1873.)

Amongst other things, Drs. Clementi and Thin tested the proposition laid down by Onimus, that poison is not dialyzable, and found it apparently untenable. They constructed a dialysis apparatus, with parchment, and filtered through it transmitted blood that had been allowed to rest in water twenty-four hours. Out of eight rabbits receiving this filtered fluid in minute quantities, all died. They then boiled the blood and filtered it; of

eleven rabbits receiving it, nine died within four days, and two survived.

The facts developed in these experiments are certainly very remarkable. But when contrasted with what was already known to the scientific world, they are not as startling as might appear at first glance. Even Davaine claims no originality in his researches, but credits Magendie with having prosecuted the same course of investigation many years before; and if we mistake not, it was in 1866 that Coze and Feltz instituted a similar series of experiments. The following points may be regarded as settled by the various colaborators in this interesting field of science:

1st. That septic poisons, when brought in direct contact with the circulation of living animals, exert their influence to an almost infinite degree.

2d. That their virulence can only be overcome by a dilution reaching down into the trillionths, and that neither filtering nor boiling seems to destroy their power of reproduction.

3d. That poisons are destroyed by chemical changes, and hence putrefaction prolonged beyond a certain point, diminishes rather than intensifies their power.

4th. (Which follows as a corollary from the foregoing.) Blood which has putrefied outside of the living organism, is less potent to beget fermentation than fluids taken from the animal sick, or but recently dead of septicæmia.

5th. That there is a comparatively early limit to the toxic properties of putrid blood; whilst with transmitted blood, it is well-nigh limitless—though perceptibly weakened after a certain attenuation.

6th. Healthy blood, when transfused from one animal to another, is capable of producing death.

Now, as before remarked, the foregoing experiments are chiefly interesting from the fact, that by the aid of mathematics, they give us a clearer perception of the extreme virulence of certain noxious agencies. By dealing with palpables in the shape of figures rather than impalpables in the form of molec-

ules, the mind grasps the subject more clearly. But yet we are presented with no new principle. And in fact, when we come to place these experiments in juxtaposition with clinical and physiological facts long familiar to the practical physician, they are not as surprising as they doubtless seem to the unprofessional mind. That imponderable germs of disease may float in a breath of air, is every day demonstrated, and has been known since before the days of Hippocrates. An infinitesimal mote in which reposes the germ of small-pox infects an individual, and in a few days it has undergone that fermenting process witnessed by Davaine and others, by which it is capable of infinite reproduction. Poisons thus cling to furniture, clothing, etc., for months and years. Professor Meigs, in his "Treatise on Obstetrics," mentions an instance of the tenacity of the toxic principle quite as surprising as anything in Davaine's or Thin and Clementi's experiments. He says that on one occasion a physician of Philadelphia was singularly unfortunate with his patients in confinement. Throughout a long series of cases, every woman he attended (some seventy in all), sickened and died of that septicæmic influence which we call puerperal fever. This gentleman becoming alarmed at the deadly miasm he was apparently carrying around with his person, "left the city for many days, and on returning, shaved his head, got a new wig, new clothes, new gloves, new pencil. He went into a bath, was washed clean, and dressed himself, and then visited and assisted a woman in labor, who was seized next day and died."

Now we may do well to pause here for a moment in passing, and appropriate a valuable practical lesson, in noting:

1st. The almost if not complete indestructibility of septicæmic germs, except through chemical action; and hence, that no agents are reliable as disinfectants except such as exert a direct chemical influence upon the *materies morbi*, converting it into new and inocuous combinations.

2d. It should lead us to appreciate the appalling power of poison, and make us more careful to avoid the possibility of conveying noxious matter from one patient to another.

3d. We learn from the experiments we have been reviewing, that each individual is a law unto himself as regards susceptibility to septic fermentation, and hence contagions even of the *same kind* may vary in their period of incubation from a few hours to several weeks.

But let us inquire for a moment what are the crumbs of comfort our homœopathic brethren profess to find in these experiments of Davaine, Clementi, Thin and others? They are freely referred to both publicly and privately as a vindication of their theory of infinitesimals, but which might with more propriety be called their *infinitesimal theory*. They assert with an air of triumph that these experiments "settle the question" and establish the potency "*of the infinitesimally small*"—to use the language of one of their writers. Now as regards the latter assertion, this is very true. No one denies it; and no thinking man requires a Davaine or a Hahnemann to impress the fact. In the Divine economy of the universe, where the very hairs of our heads are numbered, we believe that every ultimate atom possesses its peculiar influence. We know that through a microscopic germ—a spermatozoön—a father may transmit features, form, traits of character, and even diseases, to his children's children unto the third and fouth generation. We know that the smallest imaginable spark may light up a conflagration which will consume a whole city, but does any sane man contend because the fire originated in an infinitesimal entity that therefore its progress can be stayed by one, or the one-millionth of a drop of water?

Now herein lies one of the grand fallacies of the homœopathic treatment of disease. They commit the grave error of applying the laws governing the subtleties of disease germs to the science of therapeutics. They argue, that because the massive oak springs from the tiny acorn, therefore an acorn can fell the tree. They contend, that because a mote can originate a disease, that therefore a mote can cure it; ignoring the fact that morbid germs, however minute, have the power of development, multiplication, and infinite reproduction in the

system; whilst there is no evidence that drugs possess this power, on the contrary, it can be proven that they do not. If our homœopathic friends were only called to treat persons with the trillionth of a grain of morbid material in their systems, and could, by any possibility, ascertain its exact nidus, then, indeed, might they speak with some degree of confidence of their infinitesimals, for the remedy would be in keeping with the malady. During the recent fire in Baltimore, a druggist is said to have saved his stock with a *syringe*, by extinguishing each spark as it fell. But we presume if the whole structure had been in a blaze, not even a compounder of homœopathic pellets would have preferred his *squirt-gun* to a steam fire-engine!

There is one feature in Davaine's experiments over which the homœopathic world is especially jubilant. It will be remembered that putrid ox-blood, in several drop-doses, seemed less effective than transmitted blood, even when very much diluted. So that the first infections of the series were not as mortal as others further down the list. Now, the disciples of Hahnemann contend that this establishes their dogma, that a drug is "potentised," the smaller the quantity employed.

Davaine's explanation of the comparative difficulty of getting putrefied ox-blood to take effect, has already been adverted to. He believes that when blood is decomposed in the open air, much of the vicious material is dispelled, whilst other portions form neutral chemical combinations during the process of putrefaction. Clementi and Thin proved this to be so. For blood which was noxious on the tenth day, was inert when allowed to stand some weeks longer.

But there may be an additional reason for the increased power of transmitted blood over that of the ox, as employed by these experimenters. Every physician is aware that contagions are more or less modified in passing from one family of mammalia to another. Each family of animals has its peculiar diseases, and it is sometimes difficult, if not impossible, to inoculate one genus with the highly contagious matter of another.

Small-pox is easily transmitted from one human being to another, whilst it is less easily engrafted on the horse or the cow. And when we do succeed in doing so, the result is a much modified disease. In *retro-vaccination*, however, we know that the cow is much more inoculable, which would indicate that the original human virus underwent a kind of *homogenesis* in the system of the cow, whereby it becomes more transmissible in her family than human virus. In the same manner, it is not improbable that septic ox-blood has to go through a similar *homogenetic* change in the system of the guinea pig or rabbit, thereby rendering transmitted blood more inoculable, even in minute quantities, than fluid from an animal of a different genus.

We repeat, that Davaine's experiments prove only the intense power of certain poisons and their susceptibility of development from the minutest germs. But they establish no data which can by any possibility be contorted in favor of the potency of infinitesimal drugs.

Even homœopathy, whilst availing itself of Davaine's researches to mystify the *laity*, possesses some votaries, at least, who are candid enough to admit this fact; and we can not better enforce our position than by quoting the language of an editorial review contained in the "British Journal of Homœopathy" for July, 1873. This writer says: "There is no analogy between the multiplication of an animal ferment and the mere dilution of a drug. The one is self-reproducing, or at any rate capable of catalytic transformation of its surrounding medium; and all that has been proved is, that the ultimate smallest complete particle, or group molecules competent for such action, may be as small as the ten-trillionth of a drop. We can not argue certainly from thence to the activity of a corresponding quantity of a non-reproductive or catalytic agent like a drug." This would seem to be a virtual surrender of the whole question, so far as this individual writer is concerned.

But *we* go further, and contend that these experiments prove

the utter untenableness of the law of infinitesimal potencies, if, indeed, any proof were necessary. In the Organon (the text-book of homœopathy), p. 289, Hahnemann thus lays down his famous law of potentisation. He says: "It holds good, and will continue to hold good, as a homœopathic maxim, not to be refuted by any experience in the world, that the best dose of the properly-selected remedy is always the very smallest one in one of the high dynamizations, as well for acute as chronic diseases." Now, let us see what he would consider the "best dose" of opium, for example. He would take one grain of the drug and triturate it with a hundred grains of sugar; this was the *first* dilution. He then took one grain of this mixture, containing the one-hundredth of a grain of opium, and rubbed it up with another hundred grains of sugar; this was the second dilution, one grain of which contained one ten-thousandth of a grain of opium, and so on up to the thirtieth dilution, which is the decillionth of a grain. But this dose is not powerful (?) enough for some homœopathists, who profess to have gone as high as the three-thousandth dilution!

Now, if anything were needed to show the absurdity of this professed potentisation, is it not clear that if a reproductive animal ferment loses its power after being divided into trillionths, that a non-reproductive drug is worse than inert when divided into decillionths?

Neither Davaine nor any one else pretends for a moment that a trillionth of a drop of septicæmic blood is capable of exerting any direct power *in its unity*. It is only as a catalytic, or as a ferment, multiplying and reproducing itself, that it permeates and affects the whole system. When it fails in this self-multiplication, the animal survives unharmed; and it kills only when through the process of reproduction the system becomes saturated with the poison. So that, after all, the fatal issue is determined not by an infinitesimal part of a drop of septic blood, but by the *whole mass of the circulation*. Its potency lies not in *its dilution*, as is pretended by homœopathists to be the case with drugs, but in its *quantity and quality*. It can

not be claimed, reasoning by analogy, that infinitesimal drugs exert any influence on the system *as infinitesimals*, especially in such ridiculous dilutions as are recommended by the father of homœopathy. The only mode in which they can lay claim to any potency, must be through multiplication and reproduction, which is susceptible of easy disproof by chemical analysis; for we all know that so far from being self-multiplying, most drugs are rapidly eliminated from the system, so that in a few hours or days no trace of them remains. This is the *opposite* of what obtains in the experiments we have been reviewing.

In conclusion, we would suggest to our homœopathic brethren, since they attach so much importance to the experiments of Davaine, that they have now a rare opportunity of supplementing his researches with positive experimental proof of their infinitesimal dogma. Davaine has furnished them with the disease; now let them apply the remedy. He has shown them and the world that a rabbit can be poisoned with a trillionth of a drop of septic blood, and it now becomes their turn to prove that they can eradicate the evil with a like quantity of any antiseptic they may select. Until this is done, we think the least they say about it the better.

ART. III. — A CASE OF PUERPERAL ECLAMPSIA. By BENJ. DABNEY, M. D., McComb City, Miss.

I notice in your Journal for January, 1874, p. 26, an article from Dr. John Field, of Oregon, on "Puerperal Eclampsia," treated by hydrate of chloral. As I have lately had a case myself, I will give you the record of it.

At 3 A. M., January 21, 1874, I was called to see a mulatto woman, sixteen years old, who was taken in labor, and was suffering from convulsions.

I found her much congested about the face; head hot. Pulse strong, full and bounding. The convulsions returned every

fifteen minutes, and lasted from one to two minutes. During the intervals her breathing was very labored, and she was totally unconscious, and appeared to be in a deep sleep. The nurse told me she had been doing very well up to 1:30 A. M., and since that time had had no labor-pains, but had been having convulsions every fifteen minutes. On examination, I found the os uteri dilated to about the size of a half-dollar, but tense.

At 3:15 I gave her twenty grains hydrate chloral in water, and in thirty minutes repeated the dose. After giving her the first dose, I noticed that the next convulsion was not quite as long, and that it was accompanied with a distinct labor-pain. About ten minutes after giving her the second dose, during a pain and just after a convulsion, I made an examination, and found the os thoroughly dilated and the head engaged in the pelvis.

At 5 A. M. I delivered her of a living child, and there was an interval of one hour before she had another convulsion. I discontinued the chloral after the second dose, as her breathing seemed to get worse.

At 6 A. M., I commenced giving her the following prescription:

℞—Norwood's Tinct. Veratri, gtt. xxxij.;
Tinct. Opii., gtt., xxxij.;
Aqua, ℥i.

S.—One teaspoonful every half hour. I also ordered cold applications to her head and a warm foot-bath. At 9 A. M., finding the pulse somewhat reduced in strength and volume, I ordered the veratrum to be given every hour.

At 5 P. M., finding the lochial discharge rather scant, I ordered a warm poultice to be placed over bowels, and gave the following prescription:

℞—Hydrar. Sub. Mur., grs. xij.;
Podophylin, gr. i.;
Soc. Aloes, grs. iv. M.

S. f. in Chart No. IV., one every two hours. Ordered the veratrum to be continued, but left out the tinct. opii. The

nurse told me she had had five convulsions since 9 A. M. 22d, 8 A. M., she rested well last night; had no convulsions, but still unconscious; breathing much easier. Pulse softer and more compressible. As the medicine had not acted, I ordered an enema, which caused her bowels to act very soon. The lochial discharge had entirely ceased; I therefore had two circular blisters about two inches in circumference placed on the internal side of her legs, and used injections of warm water per vaginam. The second injection brought on a return of the discharge, and she did very well up to 3 A. M. on the 23d, when she "waked up," as the nurse termed it. I saw her at 8 A. M.; she awoke, and said she was hungry.

Since that time she has been doing very well and has had no backsets.

ART. IV.—REPORT OF A CASE OF SYNOVITIS OF THE RIGHT KNEE JOINT. By HOWARD BAILEY, Jr., M. D., Enterprise, Ark.

I was called October 31, 1873, to see Louis Morris, aged fifteen years, and residing in the Choctaw Nation, about twelve miles from Fort Smith, I found him very much emaciated, with a feeble and frequent pulse, and complaining of excruciating pain in his knee, which had been accidentally cut some six weeks before. On examination, I found the knee joint much enlarged, and not only the knee, but the whole limb bore evidences of sympathy, and was considerably swollen, the joint was completely anchylosed, and from the length of time he had suffered, I unhesitatingly pronounced the bones to be in a diseased state. I proposed amputation as the only hope of recovery to the young man, but found it impossible to gain the consent of his parents to have the operation performed. And I at once placed him upon treatment, prescribing carb. of iron —, and quinine —, every two hours; covered his knee with a Spanish fly blister, directing his mother to apply fomentations to the

limb frequently, and left an anodyne to be given in the night in the event of his rest being disturbed.

November 1st I again visited him, and found his condition somewhat improved, and he was comparatively easy, but still he could not bear his limb to be moved or scarcely touched, even the removal of the cover gave him so much pain that it caused him to scream out violently and hysterically, and this lasted for ten or fifteen minutes after his leg was exposed to view. At this time I painted the entire limb with tinct. iodine, and directed poultices to be applied to the blistered joint.

November 2d I found him somewhat better, pulse about 110 and appetite good; he said, however, that he would die if his position was not soon changed. He had been lying in the same position on his right side nearly six weeks, unable to move his body, so sensitive was the knee to any change of position. I administered chloroform to him, and when fairly under its influence, turned him over on his back, and at the same time placed his leg in an elevated position. I still continued the administration of quinine, and in addition whiskey toddy and mur. tinct. iron, gtts. xv. three times a day, this I continued, with the hope of building him up as much as possible until the consent of his parents to amputation could be secured.

November 3d, upon visiting my patient found him decidedly more comfortable, but he complains of his back being very sore. Upon examination, I discovered three large ulcers near together and about two and half inches in diameter, these I dressed with benz. oxide zinc ointment; and as he was quite communicative, I had no difficulty of getting from him a statement of his case. He informs me that on the 11th day of September, 1873, he cut his knee while endeavoring to repair a wagon-bed; the instrument with which it was done was a small broad-axe; the incision, he said, was about an inch in length, not very deep, and entering at the inner margin of the patella; no inconvenience was felt from the wound for several days; he considering it to be but a trivial matter, but little attention was paid to it. On the morning of September 24th, he went to sit up with a sick

friend, and after watching at his bedside until midnight, he became thirsty, and got up to get a drink of water. Upon arising, he found he could not walk without a great deal of pain; the knee commenced swelling rapidly, and he suffered much the remainder of the night. In the morning he was taken home and placed in bed, "and here I have been," said he, "up to this time." Soon after this the wound that had nearly closed, reöpened, and the synovial fluid was discharged. Poultices were constantly used, and ointment of every description, with the hopes of benefiting him, but to no purpose.

Dr. J. W. Davis, who lived some six or eight miles distant, was then applied to. He prescribed for the patient without seeing him. This is all that had been done for him up to the 31st of October, when I first saw the case.

November 4th, I found his condition unchanged. I emphatically told his parents that if they desired to save the life of their son, they must consent to amputation; but to this measure they could not make up their minds until the 12th day of November, when Dr. Worth Bailey, of Fort Smith, having seen the lad at my solicitation, and coïnciding with me in my views, they yielded, and informed me that I might do as I thought best.

November 14th, according to appointment, Drs. J. W. Davis, W. W. Bailey, W. H. Bailey, Sr., and myself assembled at the house of my patient; and, after an examination of the limb, it was the unanimous opinion that in amputation was the only hope of saving life. At my request, Dr. W. W. Bailey took the knife, and after placing the patient under the influence of chloroform, he proceeded to remove the limb at the lower third of the thigh by means of the circular operation. The operation was performed as rapidly as possible, and the arteries secured, not without some delay, as there proved to be an unusual number of muscular branches, which were with difficulty caught up, and all secured with ligatures. It was found, in making the incision through the deep tissues, that a large sinus filled with pus extended some distance above the point of am-

putation, and the tissues around it were much diseased. As soon as the flaps were brought together and secured in the usual manner, the stump dressed, and the patient made as comfortable as possible, egg-nogg was administered with aromatic spts. ammonia and quinine, and a generous diet was agreed upon, with gtts. xxv. mur. tinct. iron three times a day, and small doses of morphine were left to secure rest, if necessary.

Upon making an incision into the joint of the excised limb, the synovial membrane and articular cartilages were found to be marked serious destructive inflammation, and the trochanters of the femur, as well as the head of the tibia and fibula, were badly diseased, so much so that Dr. W. W. Bailey took the handle of a scalpel and dug out the substance of the bones as though it was so much dirt.

On the fifth day after the operation, the sutures holding the flaps almost all sloughed away, the flaps retracting, leaving the head of the bone exposed. This caused me considerable anxiety, as I never witnessed a similar case before. I supported the flaps as well as I could with adhesive strips and bandages. Gangrenous spots also made their appearance, but were readily destroyed by the free use of bromine, two applications being sufficient to arrest this destructive process. The wound then took on a healthy action, and healed kindly and rapidly by granulation. The young man's recovery was prompt, and in four weeks from the time of the operation, he was able to walk about with the aid of crutches; and within the subsequent three weeks the stump presented an appearance of which the most accomplished surgeon might feel proud.

The propriety of amputation was freely and fairly discussed. There was not a shadow of a doubt in the mind of any one who saw the condition of the patient on the day of the operation that the removal of the limb was the only means of saving him. The after-treatment of the stump was simple as well as effective; a weak solution of carbolic acid being used as a dressing.

ART. V.—A CASE OF MOLLUSCUM SEBACEUM OF THE SCROTUM. By Z. T. DANIEL, M. D., Eufaula, Ala.

Young Mr. D. came into the office a few weeks ago and gave the following account of himself:

Is twenty-one years of age, always enjoyed good health, having had no illness, save an occasional fever attack; offspring of healthy and highly respected parents; has been a student in schools and colleges, most of the time since twelve years of age; has been scrupulously neat and clean in his dress and habits, never indulged in beverages of any kind, has been remarkably temperate in all things, and insists that he is an entire stranger to sexual intercourse (?).

About a year ago he noticed on the left testicle a small white tumor resembling a boil, no pain, even on pressure; would not have known its presence had he not felt or seen it; in a short while other tumors, identical with the first, slowly made their appearance, confining themselves to the left testicle. In the course of a twelve-month fifteen or twenty had made their appearance, when he applied for treatment.

The young gentleman is tall, healthy, muscular, handsome, intelligent, and unusually self-possessed. I examined his scrotum, and found eighteen little tumors irregularly situated over the left testicle, and varying in size from that of a millet seed to that of a pea. The largest were pyramidal in shape, four or five in number, and were situated on the most pendulous portion of the scrotum, the smaller ones higher up, extending almost to the penis.

To the touch they conveyed a sensation similar to that of a subcutaneous buck-shot; the cuticle over them thin, polished, and of normal color, and when pressed firmly between the thumb and index finger became almost white, and resumed their original appearance when the pressure was removed. A few of the smaller ones were umbilicated, and all had broad bases.

I laid one or two of them open, and there exuded when squeezed the characteristic sebaceous secretion; from one it came out in a ribbon-shape, and was ten inches long.

They were all emptied of their contents, with little or no hæmorrhage, thoroughly iodized with the strong tincture, and in a few days all his virtuous little pests were gone. There may be other sebaceous follicles in his scrotum which will take on the same morbid action, if so, they will share the fate of their unfortunate predecessors. As a preventive, however, I prescribed a lotion of bay rum, bichlor. mur. glycerine, to be used as a wash night and morning to the scrotum.

Much could be said further in reference to this case, but I have already taken up too much space in its description.

ECLECTIC DEPARTMENT.

"Carpere et colligere."

ART. I.—ON CONJUGAL ONANISM AND KINDRED SINS. By WILLIAM GOODELL, M. D., Clinical Lecturer on the Diseases of Women and Children in the University of Pennsylvania.

Gentlemen,—Inasmuch as certain members of the London Dialectical Society have been poisoning the public mind with subtle arguments against "Over-population and Large Families," I propose this morning to devote my hour to some subjects which are not strictly medical, and yet with salient medical aspects; subjects in themselves vile and filthy, but which concern us as physicians. The wise son of Sirach has laid down the abstract truth that "the knowledge of wickedness is not wisdom;" and yet for the correct interpretation of disease, we must intrepidly search out their causes, whether moral or physical, however loathsome or impure they may be. Receive, then, these necessary supplements to your instruction in the attitude of true students; for to such the knowledge of immorality can not be immoral.

Early in the practice of your profession, you will, I am sorry to say, find out that many of your patients, who should be the

heads of large families, are practicing detestable arts to avoid offspring. You will, on the other hand, be approached, perhaps indeed be hard pressed, by husbands, and, for that matter, by wives also, for some method of congress unattended with the risk of impregnation. You will also be consulted for the mental and bodily infirmities resulting from these and other sexual sins. You must not, therefore, go out in the world ignorant of these evils, and consequently incompetent to grapple with them. It is, however, so hard a task to discuss such subjects in acceptable language, that I confess to some squeamishness, and would much rather refer you to suitable text-books. Unfortunately, although our land is flooded with a copious literature, treating of the conjugal relations, with rare exceptions it panders to our worst instincts, and defiles with the slime of an impure fancy. Impudent quacks and men of battered reputations must not be your guides; far better is it for you to learn a new thrust of fence from a friendly foil, than from the stab of a foe.

My purpose is less to discuss the moral obliquity of these secret sins of the community than to show the resulting disorders. Yet I shall not limit myself to the one point of view, for the conjugal relation is twofold in its nature; it has a moral as well as a physical expression, but so interwoven that it is hardly possible formally to dissociate them. Nor would it be wise for a physician to do so; for who, so well as he can, determine how far a disturbance in the one will affect the other? Moreover, so irreparable is the moral and physical degradation resulting from these vicious sexual relations, so damaging are they to good health and to good morals, so fatal to national prosperity, that I can not go far astray in assaulting them with every available weapon.

You have all had a religious training and respect the teachings of the Bible; let us see what light they throw upon the conjugal relation. The first words addressed by God to our first parents conveyed the following blessing and command: "And God blessed them, and God said unto them, Be fruitful, and multiply, and replenish the earth." The same blessing and

command, in precisely the same words, were twice given to Noah. Abraham and Ishmael received the same blessing, and so did Isaac, thrice in one chapter. Laban's household sent away their sister Rebekah with the same blessing. "Give me children, or else I die," was the cry of Rachel. Jacob called his offspring "the children which God hath *graciously* given thy servant"; and the same patriarch, when dying, raised himself upon his staff in order with greater solemnity to invoke upon his beloved son Joseph "blessings of the breasts and of the womb." The Psalmist declares that "children are an heritage of the Lord, and the fruit of the womb is his reward"; and in Exodus we read that if a man "take him another wife, her food, her raiment, and her *duty of marriage* shall he not diminish." Throughout the Old Testament you will find that fruitfulness was regarded by Jew and Gentile as the greatest of earthly blessings, and that as such it was the reward of the righteous, and as such it was withheld from the wicked. How a profanation of this blessing was regarded by God, you all know from the history of Onan, who was slain for resorting to one of the "preventive measures" in vogue at the present day. Again, in the New Testament we find St. Paul giving the following advice to the married Christians at Corinth: "Defraud ye not one the other, . . . that Satan tempt you not for your incontinency. Let the husband render unto the wife due benevolence; and likewise also the wife unto the husband," etc. I have not to quote all that the apostle says upon this subject; but, mind you, this advice was given in troublous and persecuting times; times in which the temptation was great to prevent the increase of families; times to which the words of our Saviour were especially applicable: "Woe unto them who are with child, and to them that give suck in those days."

To these scriptural precepts and blessings you may perhaps object that they were designed for special purposes, and that, as such, they can not concern the present generation of men. While unwilling to admit this, I reply that there is a natural religion as well as a revealed religion: the one, God's book; the

other, Nature's; a "Second Bible," as Bacon happily terms it. You have heard what the one enjoins; now listen to the teachings of the other. Let me turn to our Case-book, and read out the history of one of our clinical patients. Some of you have seen her in my private room, but, for obvious reasons, I have not brought her before the assembled class.

"A B., aged 30, married ten years ago, has had two children, one of them dying shortly after birth. Six years ago she and her husband came to this country and opened a small store. She was at that time in robust health, 'very happy,' and cheerfully waited upon their customers. For no assignable reason, her health soon began to fail, and six weeks ago she came for advice in a truly pitiable plight. To use her own language, she was 'very weak and miserable'; 'crying all the time'; 'can not remember anything for ten minutes'; forgets the price of goods in her husband's store; was 'constantly mislaying needful articles, and making mistakes in making change.' She was 'very suspicious,' fancied 'that everybody was against her and talking about her,' and confessed to being extremely jealous of her husband. In addition to these mental disturbances, she eructates large quantities of wind, is obstinately costive, has violent palpitations of the heart, and can not go up one flight of stairs without getting out of breath. She often staggers, loses consciousness, and sometimes falls from vertigo; is annoyed by a persistent *globus hystericus*, and has no appetite whatever. The catamenia appear every three weeks, are abundant but accompanied with pain. She has, however, a constant pain in the sacral and in the left infra-mammary region; also a frequent desire to pass water, and much 'bearing down' of all the pelvic organs."

Without wearying you with every detail, in one word, the subjective symptoms of uterine disease which she presented were more numerous and more marked than I had ever before seen in one patient. In making a vaginal examination—to which she reluctantly submitted—I was struck with the excessive sensitiveness of her tissues, and with the uncontrollable

excitement under which she labored; symptoms hitherto in my experience limited to unmarried women addicted to self-abuse. I found the vagina crimson and hot, and the womb tender to the touch, intensely congested, somewhat prolapsed, and in the first degree of retroflexion. The sound, passing through a patulous internal os, caused much pain at the fundus, and a slight hæmorrhage upon its withdrawal. The *os tincæ* was surrounded by a collar of erosion, and plugged with the characteristic glairy secretion. Finally, she flinched from any pressure, however light, over each ovarian region. The significance of these symptoms I explained to her, but I need not to you.

She then took me aside, and, unsolicited, told me her history. Being in straightened circumstances upon their arrival in this country, and withal anxious to lay by money, she and her husband had agreed to have no more children. With this view, she had submitted to the following fraudulent and one-sided expedient: At the height of the orgasm, the husband withdraws from her person, and thus commits the very crime for which Onan was punished with death. For six years such incomplete coitions had been practiced, usually as often as five times, and never less frequently than three times, a week. She had at first attributed her ill health to change of climate, but quite recently had begun to suspect its true cause from an unexpected improvement in all her symptoms, during the casual absence of her husband on business.

Prompted by this suspicion, she came to consult me as to its correctness, and actually, in case it was confirmed, to learn from me some other preventive method of congress. I explained to her the sinfulness of her conduct, and urged her to receive the approaches of her husband in a normal way, as otherwise nothing could be done for her. This, however, she flatly refused to do, saying she would much prefer a separation or even a divorce from him. Upon inquiry, I learned that her "husband was not the man he used to be"; that he was morose and dyspeptic, complaining much of general weakness and loss of appetite. Two weeks later, she came with much glee to say that

by a mutual agreement this incomplete act of coition was in future to be limited to twice a week, and that she was now ready for treatment. Whereupon I refused to have anything to do with her, and I have not seen her since.

You have heard, gentlemen, this sad history; the history of a woman whose health is shattered, whose morals are perverted, whose mind is verging toward insanity. Now, what physical law of her being, what law of obligation has been broken? Why has Nature been so resentful, and why these fierce reprisals? These are questions which press for an answer.

The sexual instinct has been given to man for the perpetuation of his species; but, in order to refine this gift and to set limits to its abuse, it has been wisely ordered, that a purely intellectual quality—that of love—should find its most passionate expression in the gratification of this instinct. Dissociate the one from the other, and man sinks below the level of a brute. Destroy the reciprocity of the union, and marriage is no longer an equal partnership, but a sensual usurpation on the one side and a loathing submission on the other. Consider the moral effects of such shameful manœuvres; wedlock lapses into licentiousness; the wife is degraded into a mistress; love and affection change into aversion and hate. Without suffering some penalty, man can not disturb the conditions of his well-being or trespass beyond its limitations. Let him violate her physical laws, and Nature exacts a forfeit; dare he violate his moral obligations, an offended Deity stands ready to avenge them. That this law is immutable, witness, from the history read to you, the estrangement between the husband and wife; witness his ill health and ill temper, and the wreck of body and mind to which she has been reduced.

The husband suffers mentally, because no *man* can behave in so unmanly a way without a keen sense of self-abasement, without being stung by the chastisement of remorse. Dishonor the body, the temple of the soul, and you dishonor the soul. Again, by this cowardly recoil, his enjoyment in the act is so blunted

that he is tempted to seek elsewhere for those pleasures which are denied him at home. Further, he suffers physically, because, although he passes through the crisis of the sexual act, completes it in that sense, yet, owing to his withdrawal from the person of his wife just before the moment of ejaculation, this acme of the orgasm, by the lack of the normal and necessary adjuvant—viz., the rugous and constringing vagina—is not sufficiently prolonged to wholly empty the *vasa deferentia*. Enough of the semen remains behind to tease his organs and to kindle in him desires too importunate to tolerate any great self-control. He is thus goaded on to such sexual excesses as no brain nor brawn can long support; for a constant drain on the life-giving fluid implies a constant expenditure of nerve-force. Early exhaustion and premature decrepitude will inevitably ensue, if this practice of "conjugal onanism" is persisted in. Nor is this name a misnomer; for there is no essential difference in this habit and that of masturbation. Both injure in precisely the same way, and for precisely the same reasons. It does, indeed, seem to be the law of Nature that man must suffer the punishment of the onanist, if he parts with the "seed of another life" in any other way than in that by which it tends to become fruitful.

The wife suffers the most, because she both sins and is sinned against. She sins, because she shirks those responsibilities for which she was created. She is sinned against, because she is defrauded of her rights. Lawful congress completely performed so far satisfies an imperious instinct, that attendant local congestions are at once relieved, and to great nervous excitement succeeds a calm repose of body and mind. On the other hand, conjugal onanism provokes in her desires which keenly solicit that very gratification which is denied by the nature of the act. The excessive stimulation of the whole reproductive apparatus remains unappeased. A nervous super-excitation continues, which keeps up, as in our patient, a sexual excitement and a hyperæsthesia of the parts. By forfeiting her conjugal rights, she does not reach that timely conjuncture which loosens the

tension of the coärctive muscles of her erectile tissues. Hence the congestive orgasm of the vagina, uterus, fallopian tubes, and of the ovaries, does not at once pass away, but persists for some time—perhaps is not wholly effaced before another incomplete coition brings a fresh installment. Thus arise engorgements, erosions, and displacements of the uterus, and inflammation of its appendages, accompanied, of course, by all those protæan mental and physical manifestations which I have so often pointed out to you. She takes distorted views of life and of the marriage relation, and harbors resentment against her husband as the author of all her ills.

But we have not yet done with the train of evils. The uterine, ovarian, and vaginal plexus of veins inosculate freely with the hæmorrhoidal vessels, and consequently with the *venæ portarum*. Hence the turgescence of the one group of blood vessels leads to engorgement of the other, and the persistent congestion of the intra-pelvic veins determines portal obstruction, and *vice versa*. The absence of valves in all these vessels, and the erectile structure of the reproductive organs, favor this turgescence. As a consequence, functional derangements of the liver are commonly associated with uterine disease. No gynæcologist has failed to observe the alternate relation of cause and effect between these two conditions. To this interdependence may be referred the obstinate costiveness, the vertigo, the loss of appetite, the dyspeptic melancholy, and the suspicious nature of our patient.

Again—for the ill effect of such practices accumulate—the very barrenness aimed at by these criminal expedients is in itself a source of disease. In sterile woman, the absence of pregnancy prevents a break in the constantly-recurring catamenia, and the physiological congestion of the womb, by ceaseless repetition, is liable to become pathological. Add to this the unrelieved congestions which arise from incomplete intercourse, and a very prolific source of uterine and hepatic disorders is at once made manifest.

I have so lately warned you against the disorders arising

from excessive coitus, even when normally performed, and more especially from that indulged in during the fatigue and discomforts of the honey-moon journey, so often the starting point of uterine disease, that it is needless for me to recur to that subject.

I wish, however, in this connection, to call your attention to another source of sexual trouble, for which your advice will be sought. Either from undue ardor on the part of the husband, or from the too frigid nature of the wife, the sexual crisis with him is over before hers is reached. Such misadventures are productive not only of unhappiness but also of disease. Here, as in conjugal onanism, the female reproductive organs are kept in a state of congestion, which is followed by like ill results, the difference being only in degree and not in kind. For this lack of reciprocation—not, however, fatal to impregnation—you will counsel to the husband the practice of some self-denial as regards the frequency of congress, and greater self-control during the act, together with a recourse to such venial promptings, as a warm and honorable affection may suggest.

But, to return from a digression, there are other artifices—nay, even equipments borrowed from the brothel,—for the purpose of avoiding conception, which may well alarm publicists and statesmen. For, vile as they are, they have received the open sanction of those English political economists who forget that crime and vice and human suffering in their land are due less to "over-population and large families," than to absenteeism, to the laws of primogeniture and entail, to the grasping avarice of the rich, and to the intemperance, ignorance, and unskillfulness of the poor.* All these expedients operate by directly preventing the access of the spermatozoa to the uterine cavity, by destroying them, or by washing them away; but they

* Besides the causes here enumerated, other unsuspected correlations undoubtedly exist, for Social Science has hardly yet reached to the dignity of a science. Thus far, it consists mainly of disjointed studies and isolated observations, which yet require the junctura callida of collation and generalization.

are all hurtful equally to mind and body. If it is hazardous for an overheated stomach to receive a glass of iced water—its natural and accustomed beverage—how much more will it be to deluge the over-congested womb with such foreign fluids as cold or astringent injections! On the other hand, those mechanical contrivances for limiting the range of the spermatozoa so blunt the pleasure as to lead to unfaithfulness or to their disuse. Moreover, in common with other teachers, I am old-fashioned enough to believe that pregnancy is a necessary condition to healthful and happy marriages; and, further, that coition is innocuous only when complete in both husband and wife, and when the germinal fluid bathes her reproductive organs. It is not always possible to trace the relation between cause and effect; some link in the chain of sequences often eludes our search. The *modus operandi* of many of our most common drugs is not known, and yet our confidence in them is not shaken, because the counter-weight of our experience is greater. Therefore, for no other reason than that the common experience sanctions this postulate, I believe that the semen, aided of course by the general relaxation following the crisis, has a special property of allaying the congestive organs and the vascular turgescence of the venereal excitement.

For the limitation of families, some conscientious, political economist recommended absolute abstinence. But, if the "nervous erethism" of long engagements is assigned by alienists as a common cause of insanity, and by physicians as a frequent source of uterine disturbance, what derangement of body and mind may not spring from this forced continence! Perhaps, however, we are wasting words on impossibilities. There is a wide-spread delusion, as old as the art of medicine itself, that intercourse after the tenth day following the cessation of the menses is not attended with the risk of impregnation. But ovulation is not necessarily menstruation; and he who constructs domestic time-tables or trusts to his almanac will find that accidents may happen in the best-regulated family.

There are in fact no harmless or available means for thwart-

ing Nature's plain intention; for if they should not happen to injure the body, they assuredly will the mind. How immoral must be the effect, when husband and wife meet, not "to endear each other,"—as Jeremy Taylor quaintly has it,—but to adjust accoutrements, to compound antidotes, and to consummate with pre-arranged precautions and cold-blooded calculations a union which for its perfect mental and physical fruition should be spontaneous and unrestrained! All these artifices soil the purity of thought, and degrade marriage into a carnal compact which regards alone the necessities of the flesh.

Such, then, are my views upon these so-called "misery checks" and "common-sense measures"; and I feel that they can not be gainsaid. I dare any political economist to show me one innocuous expedient whereby conception may be avoided. I challenge him to name a single preventive plan which will not do damage either to good health or to good morals. Even natural sterility is a curse. Show me a house without children, and, ten to one, you show me an abode dreary in its loneliness, disturbed by jealousy or estrangement, and distasteful from wayward caprice or unlovable eccentricity. Depend upon it, gentlemen, there are no thornless by-paths by which man can skulk from his moral physical obligations; no safe stratagems by which he can balk God's first blessing and first command. Therefore, as hygienists, if not as moralists; as physicians, if not as patriots; as guardians of the public health, if not as philanthropists, I charge you to frown upon such practices, and take a bold stand against them. Else, see to it that in the end you are not held to a strict account for the knowledge you have this day gained.—*Philadelphia Med. Times.*

ART. II.—ON SPASMODIC DYSMENORRHŒA. By DR. J. MATTHEWS DUNCAN, Edinburgh.

Spasmodic Dysmenorrhœa.—This is the chief form of the disease. When present in a high degree it is intense suffering.

The pain is often so great as to produce writhing, sometimes sickness and vomiting, sometimes prostration with cold sweating. The pain is described by the sufferer as spasmodic; generally remitting, sometimes nearly completely intermitting. It may occur at any time during menstruation, or even while menstruation is absent. Generally it is the severest in the early days of the discharge, and frequently most so on the second day, or before the menstrual blood flows freely.

The disease, as it comes before the physician, is generally chronic. It may have begun insidiously, and gradually increased. When it has once begun it returns with great regularity at the periods, but its intensity at different periods is liable to great variations. It is common among the unmarried, specially affects the sterile, commencing after marriage, and much less frequently the fertile.

I have not been able to arrive at any satisfactory results as to the etiology of the disease. Only that sterile marriage is frequently in some way or other the cause of it.

This disease has long been regarded as being produced by mechanical obstruction to the passage of the menstrual fluid out of the cavity of the womb, and latterly, the prevalence of this view has greatly increased, and the term stricture has been applied to the obstructing cause. The pain is then described as being produced by uterine efforts to expel the retained menstrual fluid; but real bearing-down expulsive efforts are an uncommon occurrence in this disease. There are great difficulties in the way of realizing a satisfactory theory of spasmodic dysmenorrhœa. Yet this common mechanical theory is untenable in the present state of our knowledge. The disease which naturally occurs to the mind as the analogue of so-called mechanical dysmenorrhœa is stricture of the urethra. In both, there is believed to be partial closure of the natural passage for the discharge of an accumulated and accumulating fluid. In both, mechanical means of cure are recommended, and with one merely mechanical object in view—enlargement of the passage.

The more true analogue for spasmodic dysmenorrhœa appears

to be after-pains. In both diseases there is pain, uterine and of spasmodic kind, while a bloody fluid is exuding from the interior of the uterus and getting free discharge through the cervical uterine canal. Both diseases are generally most urgent during the first and second days, and then diminish, while the discharge continues to flow still for some days longer.

The following difficulties in the way of acceptance of the mechanical or stricture theory may be stated:

The stricture or mechanical obstruction is not demonstrated. The disease is a common one; yet, on examining the uterus, its canal is, with rare exceptions, found to be as patent as in healthy women, or as in women who have no dysmenorrhœa.

The cutting instruments and tents used in dividing or dilating the supposed obstructing part or stricture are so large as to be available only when there is no stricture. Their use is itself proof that the mechanical theory is erroneous, or that mechanical obstruction does not exist.

When, in rare exceptional cases, a stricture is found—generally a congenital stricture of the external os—dysmenorrhœa is not always observed to coëxist with it. In other words, extreme stricture may exist without dysmenorrhœa.

When, in rare exceptional cases, a real narrowing is found, as in congenital stricture of the external os, accompanied by dysmenorrhœa, then cure of the stricture is not found to be reliable as a cure of the dysmenorrhœa.

When there is imperforate hymen or complete atresia of some part of the neck of the womb, and consequent dilatation of the uterine cavity by retained menstrual fluid—that is, when there is absolute obstruction to the discharge, not merely a stricture—then the pains complained of are not so severe in kind or degree as in a characteristic case of spasmodic dysmenorrhœa.

Not only is there not described any stricture or mechanical obstruction, such being only imagined; but the dilatation and hypertrophy of the uterine cavity, which should be the natural result of such mechanical obstruction, are not described, and not found.

Characteristic dysmenorrhœa is observed at menstrual periods which are scanty in flow. Indeed, many authors describe scantiness of flow as the ordinary condition of the disease.

It is often observed that when the menstrual flow becomes copious the pain ceases, or when it is copious from the beginning, the pain is slight or absent—circumstances quite inconsistent with the stricture theory.

Violent dysmenorrhœa is often present (if we may be pardoned the apparent contradiction in terms) when there is no flow, and consequently where there can be no obstruction, as in cases of imperfectly developed uterus, or cases where the uterus is replaced by a fleshy tubercle.

The disease sometimes disappears unexpectedly, and after some healthy periods, returns again; a circumstance quite inconsistent with the existence of a permanent contraction or stricture.

The stricture theory fails at every point; for even were there a considerable stricture, yet not an absolute closing of the canal, it is impossible to regard it as an obstruction to free discharge. A very small opening—that is, much smaller than that of the natural or ordinary uterine size—is sufficient to allow easy passage to a much greater quantity of blood than seeks discharge. It is not true that any described size of passage (including the quality of length) in cases of stricture will impede the passage of any ordinary menstrual flow. This may be, and indeed has been, demonstrated by experiment. It is to the destruction or removal of the stricture that treatment is directed by the believers in the mechanical or obstruction theory. The very frequently unsatisfactory results of that treatment do not justify much confidence in the evidence supposed to be afforded by it in favor of the theory. Indeed, except in the case of the external os uteri, it has not been shown that the result of the mechanical treatment is permanent enlargement of the passage or removal of the stricture; and it is not natural to expect that such a result should follow. Incisions, at least, in the

length of a mucous canal will not enlarge it, but rather have the opposite tendency.

Supporters of the mechanical theory must meet the case against them as here stated, for the most frequently occurring conditions have been supposed. In addition, they have to show what appears to me to be intensely improbable, that the force of the movement of the blood as it is discharged from the mucous membrane is so great, as to distend the cavity of the body of the dense, unimpregnated uterus, actively and quickly.

But the theory may perhaps be applicable in special circumstances, which I shall now consider.

The canal may be closed by a plug of blood or dense mucus. This, indeed, would better account for the symptoms supposed to arise from obstruction than the imaginary stricture. But there are great difficulties in accepting this theory. For, although clots are sometimes seen in dysmenorrhœal discharge, they are by no means a necessary or even an ordinary occurrence. Again, clots would in any uterus act as injuriously as in one that is the subject of stricture, and they are not rarely observed in menstruation without there being any dysmenorrhœa. Further, if clot-plugs were the obstruction, they would stop the discharge entirely till they were displaced—a stoppage which is not described in this disease. Besides, several of the arguments against the so-called stricture tell against this supposed form of obstruction.

In like manner, many of the above detailed arguments may be made to tell against the supposition, that the partial or complete closure of the cervical canal by spasm may be the obstructing cause.

It has been said that the obstruction is at the external os uteri. But this notion is entirely without foundation of any kind. Curiously, and also ridiculously enough, this allegation is made by gynæcologists who recommend incisions for the removal of the imaginary obstruction to be extended as high as the internal os uteri.

This latter part is with some reason fixed upon as the site of obstruction. It is the narrowest point of the whole uterine passage, and it is much less dilatable than the external os uteri. Besides, other indications might be adduced. But as I have already said, no sufficient stricture has been shown in dysmenorrhœal cases to exist here; indeed, none at all. Not only does no morbid stricture exist in these cases, but the history reveals no cause of such disease coming on. Sterile marriage, for example, is a frequent alleged cause; yet it would be a bold and unjustified assertion that sterile marriage is a cause of stricture. Surgeons have not, as yet at least, found it to be a cause of urethral stricture in the male.

The analogues of dysmenorrhœa of the kind under discussion appear to me to be after-pains, strangury, tenesmus. These two last affections do, indeed, sometimes exhibit their affinity with it, by accompanying it.

Patients frequently distinguish between neuralgic and inflammatory dysmenorrhœal pains, and those of a spasmodic kind. Not rarely those of one kind disappear while those of the other kind remain.

When the uterus of a sufferer from dysmenorrhœa is examined during the absence of the flow, there may be nothing amiss discovered. It is a great rarity to discover anything of the nature of a stricture, for this is a rare malformation; and I can only here express my surprise at the language used by physicians in describing to patients the nature of their cases. Such expressions as "the womb closed," "the passage too narrow," and "stricture," are frequently and certainly inappropriately used. But frequently the following conditions are observed: An ordinary full-sized uterine probe passed into the uterus finds great and unusual sensitiveness or tenderness at the internal os of the cervix, and in the cavity of the body of the uterus; sometimes the sensitiveness is extreme, and the pain excited very violent. If the probe be allowed to remain, and the patient is asked what is the nature or character of the pain, she very frequently spontaneously describes it as the pain she has

during her monthly period. A large probe, a No. 10 or 11 of the ordinary male bougie series, can frequently in the intensest cases of spasmodic dysmenorrhœa be easily introduced, if a little pressure is kept up for a minute or so, on the obstructing internal os uteri. Frequently, indeed, a much larger bougie can be passed than a No. 10 or 11. Sometimes, in so examining a case of this kind, temporary and partial spasmodic obstruction at the internal os can be made out. There is no difficulty or obstruction usually at the external os uteri. When a large bougie is passed through the cervical passage to the fundus, and allowed to remain, the spasmodic pain excited, at first very severe, gradually diminishes, and is almost, if not entirely, gone in less than a quarter of an hour. The dilatation of the internal os is then so far effected, and probably the irritated fibres have relaxed their spasm. The pain is again momentarily reëxcited in withdrawing the bougie. The pain thus produced, is the pain of the spasmodic dysmenorrhœa; but generally severer, as might be expected. It appears probable that the pain of dysmenorrhœa is produced by the flow of blood from a uterus whose irritability is increased by the performance of the function of ovulation and its concomitant phenomena.

When a tangle-tent is introduced through the internal os uteri, and allowed to remain, the history of the pain produced is generally as when a metallic bougie is introduced, the dilatation is completed at once, for the time at least; but when a tangle-tent is introduced, this is not true, because, after the dilatation caused by the introduction, further dilatation is caused by the expansion of the tissue of the tent. Yet even with a tangle-tent, the spasmodic pain generally is at an end in some hours. Not always so, however, and this generally is characteristic of bad spasmodic cases. In them, twenty-four hours may elapse, and the patient be still writhing under the incomplete or still-proceeding dilatation. When, in these circumstances, an attempt is made to withdraw the tent, it is found difficult to effect the purpose; for while the parts of it above

and below the internal os uteri are expanded, the part encircled by the internal os has not had as yet sufficient force or sufficient time to effect the dilatation of that part. The tent is thus firmly seized by the stricture. This stricture is found to be under half an inch from the point or inner end of the tent, and it is more abrupt at the lower than at the upper or inner side. If the tent is allowed to remain longer, it at last effects dilatation to its own full expanded size. It wears out the spasm probably.

By using successively larger and larger bougies, and allowing due time for the relaxation of spasm by each successive increase in size of bougie, it is easy to dilate the whole uterine passage largely, that is, till an 18 or even a larger bougie is passed.

In studying the theory of spasmodic dysmenorrhœa, it is worth while to remember the small size of the uterine extremities of the Fallopian tubes, and the possibility of spasm in these tubes, and of difficulty in the progress of the ovulum or other discharges from the tube into the uterus.

The diagnosis of dysmenorrhœa is easily made. It is painful menstruation, and it has only to be ascertained that the patient is probably or really menstruating. To diagnose simple dysmenorrhœa, it is necessary to ascertain the absence of any complicating uterine disease which may induce the pain directly or indirectly, as a uterine fibroid.

To diagnose this kind of dysmenorrhœa is generally easy, so far as such diagnosis goes. The different kinds may be conjoined; a dysmenorrhœa may be at once neuralgic, inflammatory, or congestive and spasmodic. To describe the diagnosis would be merely to repeat what has already been said under the head of symptoms.

The treatment of spasmodic dysmenorrhœa is highly unsatisfactory.

In slight cases, relief is gained by the popular remedies directed to increase the discharge. These are the hot pediluvium, and the swallowing of alcoholic stimulants, or sal volatile. In

somewhat severer cases, benefit is got by the use of anti-spasmodics, and the weaker sedatives. Among such remedies, the chief are ether, hyoscyamus, Indian hemp. Diaphoretics are also useful.

In the severer cases all such remedies are of no avail. Relief can be secured by anæsthetic inhalations, or by the use of opium in some form. Many authors recommend the use of special preparations of these kinds of medicines, and often special methods of using opium, as by the mouth, enema, by hypodermic injection; but after many trials of all methods, I have failed to discover any decided advantage in one method or another.

It is obvious that this kind of treatment is not in any sense curing. It is a poor compromise which really consists in the drowning of a pain, or a painful disease, by another artificially-produced disease, which is probably more injurious to the constitution generally. Intoxication for a day or thereabouts by chloroform or by opium every month, is a morbid condition which has many disadvantages and dangers of its own. Yet there are cases in which the pain of dysmenorrhœa is so severe that the practitioner is glad to resort to these drugs.

Dysmenorrhœa is often associated with sterility. Both are conditions which induce women to insist upon treatment, and to make them regardless of risk. But it requires to be kept in mind by the practitioner, that he is not justified in using a remedy whose proper risk is out of due proportion to that of the disease which he is treating. A so-called radical cure has long been in use for this disease. It is dilatation of the cervix uteri, and its introduction was a matter of course, when the mechanical or stricture theory of the disease was conceived. But the value and application of the treatment by dilatation have no essential dependence whatever on the truth of the theory which led to its adoption.

It is proposed to effect dilatation of the cervical passage in various ways; by scissors, by metrotome, by sponge or laminaria tents, or by metallic pessaries allowed to remain some

length of time, or by bougies allowed to remain only a short time, and by dilators whose use takes only a short time.

The scissors are used to open up the external os of the cervix by those who believe this part to be the seat of obstruction. An ordinary scissors will answer the purpose, but special scissors have been constructed for the operation. It is easy to snip through the vaginal portion of the cervix at each side, and thus make a free opening into the cervical cavity. The wounds heal without restoring the small size of the original os—a result which can be easily understood on considering the arrangement of the parts. The operation may be compared to what may be called making an artificial hair-lip. Were the external os the seat of obstruction, this would be the proper operation for curing dysmenorrhœa. But I believe it is quite useless, except in the rare cases of abnormally small external os; and in them it can not be trusted to as a cure of dysmenorrhœa should that disease complicate the malformation. If the external os is the seat of the disease, it is of course, at least foolish to interfere with deeper parts. The plan of dilating the external os by incisions, commencing at the internal os is ridiculous, both in a theoretical and practical point of view.

The great and rational attempts at a so-called radical cure are directed to produce dilatation of the internal os of the cervix. If any particular point can be called the seat of the disease, this is the part. Many means have been, as already said, proposed and used with this object in view; but it is very doubtful whether or not any of them effect the purpose otherwise than temporarily. Cutting instruments appear at present to be the favorite tools, and it appears to me highly improbable that the result can be ultimately other than induration of the canal or passage by the resulting cicatrices. Experience, however, is the best test of their value, and may prove it; even although the theory of mechanical obstruction may at the same time be shown to be false.

The instruments for bloodless dilatation of the internal os of the cervix may be divided into two classes: First, those allowed

to remain at least a day. Second, those not allowed to remain above a few minutes.

The former class includes sponge tents, laminaria tents, metallic pessaries. The dilatation by tents is effected in one or two days. The same is true of the metallic pessaries, but it is usual to allow these to remain for a long time—that is, months or years—if they do not excite acute inflammation. Various metrotomes have been invented to incise the internal os uteri, and the operation is easily performed. Hæmorrhage is not unlikely to occur, especially if the incisions which are made laterly, are made too deep. The hæmorrhage is arrested by a perchloride of iron plug in the cervix. Various injurious and useless plans are recommended to prevent, as it is said, the wound from closing, or from closing improperly.

I have used all these means of dilatation, and have been most extensively a witness, directly and indirectly, of their employment by others. The sanguine proposers of these methods have no satisfactory data to support their practical recommendations, and I regret to say that I have none prepared to support my own opinions. The absence of data is to a great extent justified by the impossibility of making good evidence out of them. Indeed, in the absence of any kind of odynometry, we must be content with a distant approach to good evidence. Some physicians appear to cure their cases as well and quickly without dilatation as others do with it. Yet in the hands of every gynæcologist there are many inveterate cases of severe dysmenorrhœa, and it is upon these alone that any dilatation should be even proposed to be tried.

My knowledge of the results of the use of the means hitherto spoken of may be summed up in a few sentences. Not unfrequently they produce a complete cure for one period; and this is no gain, because the pain (not to speak of the danger) of the operation is a set-off against it. Rarely their benefit is more lasting, the cure being partial or complete. Not very rarely they have caused death either by hæmorrhage or by inflammation. Very frequently they have caused cervical catarrh,

endometritis, parametritis, perimetritis, ovaritis, with all their attendants ills. Frequently they have aggravated the dysmenorrhœa. In short their use has been most unsatisfactory. So much has this been the case, that, in common with those friends on whose experience and judgment I have most reliance, I have been reluctantly forced in the meantime to discontinue the use of a most promising remedy for a most painful disease.

But the occasional complete success of the plan has led me to try again the method of effecting the purpose, with the least risk of doing injury, the second class of instruments for bloodless dilatation being used. The least injurious method is the oldest of all, and it has been nearly forgotten in the crowd of its modern rivals. Even of it I would not wish to be thought to speak definitely. It involves the infliction of no wound; the instrument used remains in the womb only for a few minutes at a time, and a sufficient time is left between the repetitions of its use to allow the disappearance of the irritation it causes. This method certainly causes much pain; but if it do not cure, it appears to me to cause, in the very great majority of cases, no injurious inflammation.

The operation is performed between two monthly periods, and it consists in introducing as large a bougie as will easily pass (a 10 or 11 in the ordinary male urethral series.) On each successive day a larger bougie is introduced, till after several introductions, say seven, a large bougie is passed (an 18 or 19 in the ordinary male urethral series). The bougie to be passed does not enter the cavity of the body of the uterus at once, but moderate pressure continued for about a minute secures its passage. The dysmenorrhœa-like pain produced is severe.

All the varieties of treatment, medicinal and other, applied in other forms of the disease are also tried in this form, and success is said occasionally to follow their use.—*Edinburgh Med. Journal.*

ART. III.—THE TREATMENT OF ERYSIPELAS. By DR. V. KACZOROWSKI. [Translated for the Journal from the Berliner Klin, Wochenschrift, Dec. 30, by E. WIGGLESWORTH, Jr., M. D.]

During the last three months so many cases of erysipelas have occurred here in Posen, that we are justified in speaking of an epidemic of this disease.

The same has occurred in other large cities, especially in Berlin.

The malady, especially in advanced cases, has been characterized by a marked intensity in the nature of the symptoms, excessive dermatitis, with mortification of the skin of the whole limbs, and a tendency to spread over the entire surface of the body.

The object of the physician has always been to interpose a barrier to the progress of the inflammation outwards from its starting point, since this progress guages the injurious effects of the disease.

The following remedies, arranged according to their value—nitrate of silver, collodion, oil of turpentine, coal tar—do not, unfortunately, always suffice, and erysipelas is only too common, in the case of many people, after even apparently slight injuries or operations.

Since the disinfecting properties of carbolic acid have become more thoroughly recognized, I have instituted a series of experiments, extending over the last two years, with regard to the action of this agent in cases of this disease, basing my anticipations of a favorable result upon my belief that erysipelas is an infectious disease, dependent upon the presence of micrococci, a belief justified by the concurrent testimony of the investigations of von Recklinghausen, Woldeyer, Hueter, Klebs and Orth.

The results of these experiments have been extremely favorable, almost without an exception.

Appreciating the deceptiveness, as a rule, of infallible remedies, and the consequent disappointment of the practical physi-

cian, I have refrained from the publication of my method of treatment so long as my observed cases were few in number. But the extended opportunities of investigation offered me in the hospitals during the last few months, both as to number of cases and severity of symptoms, have confirmed my belief, and warrant their introduction to the medical public.

My colleague, Dr. Samter, who has charge of the female wards of the City Hospital, has adopted my method of treatment, and neither of us has thus far lost a single case of erysipelas, although many very advanced cases have been sent to us, completely exhausted, and with gangrenous destruction of the skin of entire arms and lower thighs.

The treatment is a combination of several factors, the object of which is, on the one hand, a repression of the development and of the extension of the globular bacteria, and, on the other, the support of the resisting power of the organism, the heart, by stimulation and an easily digestible diet.

To obtain the first result, those parts of the skin which are affected already by erysipelas are rubbed, by means of the finger or a little sponge, every three hours, with a mixture of carbolic acid and oil of turpentine (1.10), but *very gently;* the skin in the neighborhood, however, more energetically. The whole district rubbed is then covered with a soft linen compress moistened with concentrated lead water (1.100), and finally the parts affected already by the disease, are again covered, outside of this compress, by thicker linen cloths dipped in ice water and lightly wrung out, or by a bladder of ice.

The external enveloping compresses with ice water, are changed as often as they begin to grow warm.

The head, or a whole extremity may be thus covered with ice water compresses; lesser affected surfaces on one level may be covered by the ice bladder, which requires a less frequent renewal.

Internally, the patient takes lemonade, or a weak solution of chlorate of potassa, to alleviate the accompanying stomatopharyngitis, and prevent diphtheric depositions, and every one

or two hours a teaspoonful of strong wine, to support the action of the heart.

In very rare cases, accompanied by excessive adynamia, a few doses of camphor were exhibited.

For the relief of pain, and the limitation of the exudative process, a subcutaneous injection of morphia (0.005–0.01), is made morning and evening, in the vicinity of the parts affected.

Regular operations of the bowels are induced by cold water clysters, or castor oil.

The subjective condition of a patient under this treatment is quite endurable, for he lies the whole time in a light doze, almost without pain.

Objectively, we notice, on the places which have been rubbed, at first increased redness of the skin, which extends more and more, under the successive inunctions, over the previously healthy skin surrounding the erysipelatous patch, frequently producing vesiculation and loss of epidermis.

This artificial erythema of the previously healthy skin is easily distinguished from the erysipelatous district, since in the periphery of the former, there is wanting the œdema of the skin which accompanies the erysipelas.

We next observe a dryness and shrivelling of the epidermis of the erysipelatous patch, as if this had been slightly tanned. This condition soon extends outwards, over the surrounding territory, although less in degree.

In the course of twenty-four to forty-eight hours, the exudative process is cut short, as is manifested by a somewhat abrupt fall in the temperature of the skin and in the frequency of the pulse. This is the signal to desist from the inunctions, though the lead-water compresses around and outside of the erysipelatous patch may be continued for one day or more.

When this treatment has been pursued, we have never seen a relapse.

If the erysipelatous process extends itself beyond the time stated, it is the fault of the attendant, and no such case has

occurred in our experience since we impressed this fact upon our hospital nurses.

Finally, I must remark that the use of tar, as recommended by Professor Hueter, is based upon these same principles.

Where I have employed tar, the desired result has been less speedily obtained than by my own method, possibly because the tar, from its consistence, is less thoroughly taken up by the skin than the more fluid oil of turpentine, impregnated with carbolic acid.

Tar is also less well adapted for use upon the scalp, especially in the case of ladies, than my solution, in which the oil of turpentine conceals almost entirely the smell of the carbolic acid.

Above all, I hold that the use of tar alone, with the simultaneous employment of cold, is sufficient for the speediest possible cutting short of the process.—*Boston Med. and Surg. Jour.*

ANALYTICAL DEPARTMENT.

"Qui e nuce nucleum esse vult, frangit nucem."—PLAUTUS.

ART. I.—RESUSCITATION OF A NEW-BORN INFANT AFTER NEARLY FOUR HOURS OF ARTIFICIAL RESPIRATION.

This instructive case is reported by Dr. John J. Marshall in the "Medical Press and Circular." Upon being called to the mother, the right arm and funis were found to be presenting, and, after a short delay, "turning" was resorted to and delivery effected. The child, when born, was apparently lifeless, so that the funis was divided, without ligature, to see if any blood issued from the cord, and the child never cried; while slapping, cold water sprinkling, and brandy application failed to elicit any indications of life. When the child was placed on the table and in the light, faint pulsations of the heart were noticed, which led to attempts at artificial respiration. The method in which respiration was maintained is well described. The in-

fant having been laid upon his back and rolled in a warm blanket, was so placed that the head extended over the edge of the table, and was allowed to droop a little, to prevent the air from passing into the stomach. The face was next covered with a towel, and the little nostrils having been compressed with the left thumb and forefinger of the operator (his right supporting the head), air was regularly and forcibly breathed into the lungs, and again expelled from them by an assistant pressing alternately with his two palms on the chest, which was also vigorously rubbed with brandy.

This treatment, *after an hour's* steady prosecution, the heart's action in the meantime being almost imperceptible, was rewarded with one voluntary inspiration. The artificial respiration was patiently persisted in, and at the end of another half hour, a second single gasp was given. Hot baths and the treatment recommended by Sylvester and Marshall Hall were next tried, until at last, the child began to breathe regularly at the rate of fifteen respirations per minute, this being at the expiration of nearly four hours after birth.

Dr. Marshall concludes with the observation that, out of all the methods of resuscitation employed in this case, the breathing and expulsion of warm air appeared to have the most beneficial effect on the infant, and especially when the mouth-to-mouth breathing was combined with the raising and depressing of the arms.

The result of this case should encourage the practitioner not to regard as hopeless the condition of those infants who may be born in a state of defective vitality, asphyxia, or apoplexy; for if our efforts at resuscitation are only persistently maintained, we may often succeed, even after the expiration of hours, in restoring the child to life.

ART. II.—TREATMENT OF FISSURES OF THE NIPPLE.

In a paper by Dr. Creéquey, fissures of the nipple are de-

scribed as being of two kinds. First, those produced by the violent suction on the part of the child; here the epidermis is raised and abraded, as if by a cupping-glass. In this condition of the nipple, the child should be allowed to suckle only when the breast is charged with milk. Second, at other times, a little of the milk lodges in the minute cracks at the base of the nipple, where it comes in contact with the secretions of the body and rapidly decomposes, thus acting as an active irritant of the skin, and in some instances inducing very extensive inflammation. As a preventive of cracked nipples, originating in this manner, the breast should be bathed with warm water, wiped dry, and then annointed with the following ointment—

℞.—Tannin, 1 gramme; (gr. xv.)
Glycerine, 10 grammes; (℥ jj.)

This should be applied by means of a camel's hair brush, after which the nipple should be protected with charpie, or a soft linen cloth. In these cases, the nipple-shield may be employed to advantage.

If the breast be distended with milk, relief may be afforded by the application of a large flax-seed poultice, taking the precaution to protect the nipple with a piece of soft leather.—*Gaz. des Hop.*

Art. III.—Removal of Fibroids by Enucleation.

Dr. T. Gaillard Thomas exhibited to the New York Obstetrical Society a mass the size of a cocoa-nut, consisting of three fibroids which he had recently removed by enucleation. The woman, who was a patient of Dr. H. Moeller, had suffered for some months from excessive menorrhagia. When seen by Dr. Thomas, the uterus was found to be as large as at the fifth month of gestation; the cervix was found well dilated, and a large fibroid presenting, which, on examination, proved to be sessile, and attached posteriorly. The patient lying upon her back upon a table, Dr. Thomas proceeded to enucleate by cut-

ting through the capsule of the tumor with scissors, and then insinuating a grooved steel sound under the capsule, which he separated as far as possible from its attachments. Traction was then resorted to, combined with powerful expression from above, which resulted in the extrusion of a large mass in about forty minutes; another mass was felt above the one extracted, which was in like manner removed; traction then being made upon the capsule, it came away, having attached to it a still smaller tumor. There was a very little hæmorrhage. Opiates were given, and intra-uterine injections of carbolic acid were daily used. The patient did well for four weeks, though she now has a mild attack of phlegmasia dolens, from which she has suffered once before as a sequel to parturition. This is the sixth case in which Dr. Thomas has resorted to enucleation, in all of which recovery has been perfect. He has, however, lost two patients in the preparatory treatment by sponge-tents. Dr. Thomas considers the operation in its results more formidable than ovariotomy.—*Am. Jour. Obstetrics.*

Art. IV.—Hydrate of Chloral in Obstetrics.

Dr. Dujardin-Baumetz has recorded, in the last number of the "Gazette Medicale de Paris," several cases in which the use of hydrate of chloral was remarkably successful. In the first case (primapara, protracted cephalagia, œdema of legs and eyelids, albumen in urine) a fit of eclampsia supervened two days before the labor, and lasted ten minutes. An enema with one drachm of chloral was administered, and the patient fell asleep. On the day of the accouchement, as a precaution to avoid a recurrence of the fit, two enemata with one drachm of chloral in each, were administered at two hours' interval. No fit occurred, and, furthermore, the contractions were quite painless, though they were even more intense and frequent than normal. In the second case, where albumen was found in the

urine, there existed the usual conditions for eclampsia. Hydrate of chloral was administered, as a preventive, and no fit occurred. Lastly, in several other cases, where the patients were excitable, nervous and weak, Dr. Dujardin-Baumetz gave chloral with the greatest benefit, in doses of from one-half to one drachm. It always had the effect of soothing the pain, and, moreover of accelerating the process of labor. Dr. Baumetz much prefers chloral to chloroform in eclampsia, but recommends that it should be administered in sufficently strong doses (two and even three drachms).—*The Lancet.*

CLINICAL RECORDS.

"Ex principiis, nascitur probabilitas: ex factis, vero veritas."

ART. I.—TRACHEOTOMY IN DIPHTHERIA AND CROUP, WITH THE RELATION OF TWO CASES. By JOHN D. JACKSON, M. D., Danville, Ky. [Read before the Central Kentucky Medical Association, at its Meeting in Danville, Ky., Jan. 22, 1874.]

On the forenoon of Wednesday, Aug. 13, 1873, I was called to meet Dr. McKee, of Danville, in consultation, in the case of James S., aged five years, the son of a well-to-do farmer of Boyle county, because of impending death from suffocation. Dr. McKee had been in attendance upon the little fellow, since the previous Friday. His case, as the Doctor informed me, had been one of diphtheria—diphtheritic patches having been plainly visible on the tonsils; but at the time of the consultation they had disappeared, and though the pharynx and tonsils were preternaturally red, there was no membrane whatever to be seen. The parotid, submaxillary and cervical glands were, however, markedly enlarged, and that diphtheritic membrane had formed in the larynx and trachea was plainly to be inferred from the intense dyspnœa, the loss of voice, and the hoarse, tubular, croupal sound of his breathing. That the deposit had not yet formed in the bronchi, however, was conjec-

tured; for, on auscultation, the vesicular murmur was everywhere audible and natural, excepting that it was commingled in the right upper lobe with some rude respiration and a few râles. The respirations were at the rate of about 30 per minute, and very labored, and the pulse 130. The patient was a ruddy, chubby little fellow, though a faint duskiness was beginning to suffuse his face.

It was very evident that scarcely a hope of recovery was to be entertained from the natural progress of the case; for Dr. McKee, who had observed the patient daily, had perceived the difficulty of breathing arise three days before, and had been forced to witness the regular, almost hourly progress of the dyspnœa, despite the repeated use of emetics, mercurials and iodides. It was thought by the Doctor, and I fully agreed with him, that tracheotomy was about the *dernier resort*, and that reviewing the progress of the malady, this was to be considered only as a *forlorn hope*. However, before resorting to it, we determined to persevere a little longer with the remedies used, increasing largely their dose, and if on meeting again a few hours afterwards no improvement should be manifest, to at once operate.

On meeting again at 5 P. M., we found the condition of the patient markedly worse; the pulse had arisen to 138, the breathing was exceedingly labored, and the prolabia and fingers showed commencing cyanosis. A glance at the patient, even by no very practiced eye, showed that death by suffocation was imminent—that a few hours at most, would close the scene. The question in our minds now was, whether we had not lost precious time, and diminished greatly the chances of recovery by deferring tracheotomy from morning to evening. The parents having previously had explained to them fully the danger of death to the patient during the performance of the operation, and the doubt as to ultimate recovery, even if the operation terminated perfectly successfully, yet promptly gave their assent to it, saying that though they were not physicians, it was very plain to their common sense, that as it was, the little fellow had

but a very short time to live, and that they were willing to risk anything whatever promising the slightest hope—that if he died on the table, it would abridge his life but a few hours and those of suffering, to which death were preferable.

We now chloroformed him, and placing him upon a table near the light of a western window, with the assistance of Dr. McKee and Mr. Joe Meyer, a medical student, I proceeded to perform tracheotomy, not forgetting Trousseau's maxim to "operate slowly." However, just before getting the trachea fairly bare, and while the wound was yet filled with blood, I was compelled to cut boldly and enter it with the straight bistoury, and extend the incision with the probe-pointed instrument, for suddenly, for some reason, the little fellow ceased to breathe. As quickly as possible after opening the trachea, I hooked a tenaculum into one side of the wound, and turned the patient over upon his face, and Dr. McKee promptly commenced artificial respiration with him, after Sylvester's method. Within a minute, respiration had returned with full force, accompanied by the coughing of bloody mucus. The tenaculum hooked into the lip of the tracheal wound, so as to keep it as widely open as possible, was retained thus for a few minutes, and the breathing having become regular and soft, we introduced an ordinary silver tracheal-tube in the orifice, but this was followed instantly by great dyspnœa, and again the patient ceased to breathe. We at once withdrew the tube, hooked open the incision with the tenaculum, and again resorted to artificial respiration, which was again followed by a return of the breathing, though not so quickly as on the first occasion of the apnœa. After the lapse of a while, however, we put in the smaller inside tube, which provoked some spasmodic attacks of coughing, but was within two or three minutes well tolerated; and after probably a quarter of an hour, the larger tube with the inner one enclosed, was put in, and found to be equally well borne with the first, and was retained by a couple of strips of tape passed through the eyelets of the tube, and drawn to the back of the neck and tied.

The contrast between his breathing at this time and what it was before the operation, was very striking, for it was now soft, perfectly easy, and but eighteen to the minute; his pulse also fell to 120. The patient was then left for the night, with Mr. Meyer in attendance, with directions to give seven grains of iodide of potassium and two grains of quinine every three hours alternately, and to take out the inner tube and thoroughly cleanse it at each time of giving the medicine, or before, if the breathing should become obstructed; and if obstruction should not be thus relieved, to take out both tubes and keep the trachea open, as we had done just after the operation. Some strong soup was also ordered, and directed to be offered him every three or four hours, and given *ad libitum*.

Thursday, 14th, at 9 A. M., we found the patient looking comfortable, with no evidence of imperfect æration whatever shown in his face; pule 120; respiration 24; temperature 100 3-5; respiratory murmur clear over the whole chest, excepting at the base of the right lung, where a few moist râles were audible. He was reported to have rested pretty well, sleeping most his time, and taking two or three ounces of the soup, and drinking a good deal of water, and eating ice through the night. We determined now to leave off all medicines, and simply try to sustain him with concentrated and bland articles of food, the chief of which was essence of beef and rich milk, the object being to sustain his powers until the disease might run its course, or some complication supervening, a change be demanded, doubting much whether any medication could cut short or at all abridge the disease.

At 5 P. M., on again meeting in consultation, we learned that at 1 P. M. his breathing commenced growing difficult, and the difficulty not being removed by the taking out of the inner canula, Mr. Meyer removed the whole tube; but this did not restore free respiration, and he soon saw that the trouble was due to a detachment of a cast of the trachea, which could be seen playing up and down through the wound and threatening the suffocation of the boy. Mr. Meyer in vain tried to seize it

with forceps, as it could be seen thus oscillating, and worked thus fifteen or twenty minutes, the dyspnœa in the meanwhile being so great as to threaten death every minute. Indeed, the father, who was holding the little fellow, (who, I may say here, had an intelligence and docility beyond his years,) was finally so overcome by the frightful efforts of the child during the time of the impending suffocation, that he laid him down upon the bed and left the room, telling Mr. M. to desist from any further attempt at relieving him, but leave him to die. Mr. Meyer, however, with a most commendable coolness, again took him up, and with the aid of an aunt of the boy, of very steady nerve, resumed his attempts, and finally, in one of the violent efforts at expiration, was able to seize an end of the tube-cast as it appeared at the mouth of the wound. The upper portion of the membrane—that above the wound—remained attached to the trachea; but Mr. M., by gentle traction with his fingers, succeeded in detaching it entire; (*and we show you here the tracheal cast, which, as you see, is between three and four inches in length, and a complete mould of the trachea; the upper end of the cast, that which was above the incision, being nearly solid, for an ordinary silver probe of the pocket surgical-case will barely pass through it. It will be observed that the wall of the cast grows gradually thinner as it proceeded down the trachea. When first removed, the blood stainings upon it at different points indicated the difference in the vascularity of the trachea at those respective points. The preservation of the specimen in alcohol has obliterated the markings now.*) Immediately following the expulsion of the membrane, his breathing became tranquil, his countenance brightened, and he finally fell into a quiet sleep.

At the time of our visit (5 P. M.), his pulse was 120, temperature 100°, respiration regular and nearly natural. There was now considerable swelling about the site of the wound. He breathed very well, but occasionally coughed up a quantity of tenacious mucus. From 2 A. M., however, his respiration regularly grew worse, and at 5 A. M. on Friday—i. e., before

day-break, when death from suffocation was again imminent. Mr. M. felt confident that at this time, sixteen hours since the expulsion of the membrane, another had formed, and which having become partially detached, was producing the dyspnœa. So he again removed both canulæ, and taught by his experience of the preceding day, took a silver probe from his pocket-case, and bending it at the point, introduced it through the wound, passed it down into the trachea, trying to hook up the free end. This brought about a violent cough, in which the lower end of the membrane was forced up into the opening, when he seized and removed it, as he had done the first. (*I show you here the membrane very similar to the first; a little longer, but perhaps not quite so fully organized. You will observe that it also has nearly a solid upper end, like the first one.*)

Friday.—At our forenoon visit we found his pulse 118, temperature 99.1°, respiration excellent, appetite returning. We still refrained from medication, but enjoined the regular administration of nutriment, and a careful supervision of him, to prevent any unnecessary exertion on his part. At this time there is very plainly to be seen a new deposit on the tonsils, and the surface of the incision in the trachea is white with a diphtheritic deposit.

5 P. M.—Pulse 116, temperature 98, respiration good, appetite and secretions all good, and the boy looking brightly.

Saturday, 16th, 9 *A. M.*—Pulse 106, temperature 99 4-5ths, respiration regular, though rough. Expectoration not very free, and has now become muco-purulent. At 4 P. M., thirty-five hours since the exfoliation of the last membrane, the difficulty of respiration indicated the existence of another cast, and by pretty much the same manipulations as in the last instance, a third membranous tube was brought away (*exhibited, as observed, it is nearly a counterpart of the one preceding it*), at 12 midnight it became necessary to remove the canulæ, and two small strips of membrane were expelled.

Sunday, 17th.—Pulse, when quiet, 98, but the least movement

at once sends it up to 120, hence we continue our injunction as to preventing him from making much exertion, recollecting the records of sudden death in cases of diphtheria following a very moderate taxing of the strength, during the time of the great weakness of the heart. He has no fever, general aspect comfortable, appetite and digestion good, bowels and kidneys performing their functions satisfactorily. The deposit on the tonsils was disappearing; he passed the day very well, though he expelled several membranous pellets through the canula that afternoon. The expectoration was more abundant and more markedly muco-purulent.

Monday, 18*th*.—At 2 P. M., forty-six hours from date of last cast, the breathing having become difficult, the canulæ were removed, and a thick cast an inch in length was expelled, which Mr. Meyer thought, together with the other detached particles which came away, would in the aggregate have made a cast of about the size of the others; (unfortunately, this smaller piece was not preserved). By putting the palm of the hand over the wound and accurately closing it, air was perceived to issue through the mouth for the first time since the operation. He could now also begin to articulate, though faintly. The deposit on the tonsils had also disappeared, though their white diphtheritic film yet coated the wound.

From this period his general condition remained good, though, for the next three or four days, he expectorated freely a muco-purulent discharge, frequently tinged with blood, and occasionally commingled with it, bits of false membrane, but which were readily expelled through the canula, at no time giving rise to violent dyspnœa.

On Friday, the 22d, the eighth day from that of the operation, on attempting to drink some milk, he became choked, and on coughing, a quantity was coughed up through the canula. From this time on, for a number of days, this pharyngo-laryngeal paresis gradually increased, so that he could not take water, milk, or any other fluid, without having a paroxysm of

coughing after a swallow or two, though it would be tolerably readily coughed up through the tube.

On Saturday, 23d, Mr. Meyer ventured to keep the tube out for four hours in the forenoon and three in the afternoon, without any other difficulty than some trouble each time in reïnserting the tube, from the strong tendency of the wound to close. His breathing through the mouth was now better than before, but he could bear stoppage of the orifice of the wound for no more than a half minute.

On Sunday, 24th, ten days from the operation, the falling of fluids into the trachea on swallowing had increased to such a degree as to excite grave apprehensions. With the view of checking the progress of it, if possible, we prescribed the one-sixth of a grain of ext. ignatia amara combined with a grain of quinia, four times in the twenty-four hours. The cough at this time had greatly diminished, and the expectoration, while still profuse, was of the appearance of normal mucus.

Monday, 25th, pulse 126, temperature 99°, paralysis of the fauces and epiglottis progressing. To-day, while eating some candy, some particles dropped into the windpipe, the first solids yet entering the larynx, though this was readily coughed up through the orifice of the wound. A portion of every mouthful of fluid swallowed runs down into the larynx and is coughed up. The ignatia extract and quinia are ordered every four hours, and even oftener, if some tetanic effect is not soon seen, and the use of as little fluid as possible is directed; all of his bread is ordered to be given him previously soaked in milk or coffee. Indeed, the little fellow now dreads every effort to swallow water or milk, and tries to gulp down as large mouthfuls as possible, though, between the first and second swallow, the fluid runs out at the wound, and he has instantly to stop and go through a violent fit of coughing.

I have given above many details of minutiæ, because I thought they might prove interesting to some of you, who possibly, in future, may have a similar case; but for fear a continuation may prove tedious, I will summarize by saying, that,

after two or three days more, the pharyngeal paralysis seemed to have reached its acme, or was checked by the medicine used for the purpose, though of the latter we felt a little doubtful, despite the fact that the dose of the ignatia extract was increased to a third of a grain every two hours, which in a child so young might be pronounced heroic, though we may say he was all the while watched by an intelligent attendant, who had orders to at once diminish the dose on the appearance of any marked tetanic symptoms. These, however, were never more than slight, and on the paralysis ceasing to advance, the doses were diminished to four in twenty-four hours. During this time, he was taken out driving for some miles every morning and evening, and fed on the most nutritious diet. Until the end of the second week we feared to permit him to exert himself in walking or otherwise; for during this time the heart's action was so weak as to have the pulse rise fifteen or twenty beats on the slightest exertion. Testing with the dynamometer, the paresis was found not to be confined to the pharynx, but to be unilateral, affecting the left half of the body.

To sum the case up, he very gradually improved, though fluids so constantly fell into the windpipe on his swallowing, that we feared to remove the canula until the 24th of September, forty-one days from the time of its introduction. Its removal was followed by perfect closure of the orifice within a few hours. Nasal speech, from partial paralysis of the velum palati, continued for some time afterward; but to-day, his voice and general health are perfectly restored.

On the night of Thursday, December 18, 1873, I received a brief note from Dr. Huston, of Bryantsville, asking me to meet him as speedily as possible in consultation in a case of pseudo-membranous croup, in the family of Mr. K., of Bryantsville, and to come prepared to perform tracheotomy. I reached Bryantsville about midnight, and found the patient, a well-developed and generally healthy little boy, aged three years and four months. He had been sick with croup since Tuesday, and

was on that day visited by the Doctor, but on Wednesday seemed so much relieved that it was not thought necessary to have the Doctor see him. On Thursday, however, he had grown greatly worse, and though Dr. H. had resumed his visits, and vomited him freely again and again, and used those means usually found successful in relieving spasmodic croup, he grew regularly worse, until at night, when the messenger was dispatched for me. His condition was most alarming from impending suffocation. Dr. Huston had, however, again resorted to emetics, and when we met in consultation, his condition was not so immediately threatening, though there was no evidence of the improvement being more than temporary. The patient had lost his voice early in the day, and the breathing was distressingly difficult. Each hoarse, croupal inspiration and expiration being distinctly heard throughout the adjoining room, as we sat in consultation. His pulse was 150; his face, however, did not show incipient cyanosis, though Dr. H. said it was very apparent earlier in the night, before the last free vomiting spell. Percussion exhibited dullness, and auscultation tubular breathing in the upper lobe of his right lung.

Since cyanosis was not now present, it was agreed to defer operative interference a while longer, though the aggregate of his symptoms promised nothing by delay. The difficulties of operating by candle-light, however, determined us to wait any how until morning, unless an aggravation of the symptoms should compel us to act sooner. In the meanwhile, one and a half grains of calomel and three of ipecac were given every two hours during the night, and at 4 o'clock he was again freely vomited with tartar emetic.

On Friday morning, the 19th, he was in no respect better; but, on the contrary, his respiration, while of about the same rapidity as during the night, was even more labored; his pulse 152 and smaller and weaker, and his lips were becoming bluish and his cheeks dusky. Evidently, if tracheotomy was to avail anything, it could be postponed no longer. We, therefore, proceeded to operate, after chloroforming him. Although his neck

was short and fat, the operation was done without a great deal of difficulty, and with very little loss of blood. The final incision through the three tracheal rings, unlike in the diphtheritic case above recorded, being made dry, so to speak, unembarrassed by any blood in the bottom of the wound at the time. Being ready with tenaculum at hand, we instantly hooked it into the wound and turned him over on his face to prevent the blood of the incision from flowing into his windpipe, and to facilitate its flowing out of the wound. For a minute or two he was black in the face, and seemed to be dying, during which time we kept up artificial respiration. He finally coughed up a quantity of bloody tenacious mucus, and breathed regularly. The tracheal tube was now inserted and retained. His pulse fell to 118, but his respiration remained at 32, though was now perfectly regular, easy, and free from the croupal sound. Occasionally, however, there would come on a little dyspnœa, attended by some coughing, as if some obstruction had gotten into the tube or the larynx. We thereupon sent to the barnyard, got some chicken feathers, and selecting a number of proper length and pliability, kept them ready for use; and when the difficulty of breathing would become very marked, would insert a feather into the tube, and on thrusting it down two or three inches into the larynx and twisting it rapidly around once or twice and quickly withdrawing it, it would invariably come up with a quantity of very tenacious mucus adhering to the plume. At 1 o'clock I left him breathing perfectly well, though I observed as an unfavorable sign that his pulse had arisen from 118 to 126. We agreed to give him no medicine, save a grain and a half of quinine every six hours, unless some special indications might arise for so doing, but to rely upon the most nutritious diet, regularly administered.

For my further report of the progress of the case, I am indebted to the letters of Dr. Huston.

On the 20th the respiration was from 45 to 56, pulse 140 to 150 in the early part of the day, and everything unpropitious, but the quinine was continued, and in addition, a grain of Do-

ver's powder, and one-tenth of a grain of tartar emetic were given every two hours, when his respiration and pulse both improved, and he expectorated a quantity of mucus. The dullness in the right long remained. It was necessary to clear the canula every hour.

On the 22d, the Doctor wrote that he did not think the patient would live through the day—that his breathing was almost as bad as before operating, that he had frequent spells of choking, and that his face was livid, and extremities cold. Of course the next intelligence I expected, was of his death. I was therefore agreeably surprised the day following, to receive a letter from Dr. Huston, from which I quote the following:

"*December* 22—Dr. Jackson: Our patient is yet alive, and "breathing much easier than on yesterday evening. The difficult "breathing continued until late in the afternoon; the eyes were "set, face pallid, and there were all the signs of impending "death. I tried about an inch and a half below and above the "opening, but there was no membrane or obstruction. I then "tried with forceps about three inches or more down the tra-"chea, and succeeded in getting hold of pieces of a tenacious, "dark-colored, waxy-looking, mucus-like exudation, and after "removing a considerable amount, regular breathing was "finally reëstablished and rest secured.

"This process I had to repeat two or three times during the "night, and will have to continue it through the day, or the "patient will die. I am as careful as possible to avoid injuring "the bronchi in my efforts."

To epitomise the story, despite a good many difficulties, the patient went on, and made a good recovery, being to-day sound and well. The tube was kept in till the twelfth day (January 1), when the Doctor, finding him to breathe well, kept it out for an hour, when on attempting to reïnsert it, found the orifice so contracted that it would be impossible to do so without using more force than he thought advisable. No subsequent difficulty ensued, no sign whatever of paralysis has shown itself, though now more than a month has elapsed since the operation.

COMMENTARY.

I have related the above cases of tracheotomy—one in diphtheria, the other in croup, so much in detail, as to have run the risk of wearying you; but I did this to give you a fair opportunity of forming a clear judgment of the unpromising nature of the cases, of how little rational hope there was for relief if left to nature, or the administration of medicines; and, indeed, to show how unpropitious they were for a successful termination, even after tracheotomy. It was the unequivocal conviction of all the medical attendants in each case, that tracheotomy, and that alone, gave a possibility of recovery, and the sequel in each confirmed the correctness of the conclusion. The details of the cases show, furthermore, that it is not sufficient simply to perform tracheotomy successfully in such cases, but that an attendant of intelligence, an even boldness, ought to be constantly with the patient for days after the operation. Each of the patients whose cases have been above related, owe their lives to-day as much to the timely skill and determination of Mr. Meyer and Dr. Huston, as to the original tracheotomy. Though I am fully aware that it may be said with reason, that the happy issue of two such desperate cases consecutively may be attributed in a great measure to *luck*, and that by the law of averages, my next six cases of tracheotomy ought to terminate fatally, yet I have reported these two here to-day as an encouragement to other members to perform tracheotomy in their cases, *at least* when no other hope exists.

It would be out of place, since I have already taken up so much time of the Society, to now enter upon any details of the methods of performing tracheotomy, the indications for it, the difficulties and dangers attendant upon it, and the average of success following its performance in croup and diphtheria; that I leave to a future occasion. I feel that I can not better close this report than by quoting from Dr. Austin Flint upon the subject of it. Regarding tracheotomy in croup, he says:

"The propriety of the operation hinges, not on the number

"of cases in which it has proved successful, but on the answer "to the question, whether any lives are saved by it. Now it "can not be doubted that patients with this disease have been "snatched from impending death by this operation. It is "therefore not only justifiable, but the practitioner is bound, if "possible, not to allow patients to die from suffocation for the "want of its performance. * * Its failure in many cases is "attributable to its having been too long deferred, but it has "proved successful repeatedly, as a *dernier resort*, under the "most unpromising circumstances."*

Of tracheotomy in diphtheria, he says:

"The rules with regard to tracheotomy or laryngotomy, "when the danger from laryngeal obstruction is imminent, are "the same as in cases of primary croup. There is undoubt-"edly less hope of success from surgical interference than in "the latter affection. With reference to the propriety or im-"portance of the operation, however, the simple question is, "are lives ever saved by it? This question is undoubtedly to "be answered in the affirmative.

* * "If lives are ever saved by tracheotomy or laryngot-"omy in diphtheria, a practitioner is reprehensible, if he allow "a patient to die from laryngeal obstruction without opening "the larynx or trachea. The patient is entitled to the chance "of being saved by an operation, however small that chance "may be."†

NOTE.—While attending the first case above recorded, we re-read the famous essays of Brettoneau, Guersant, Trousseau, Bouchut, Empis, Daviot, and Zimmermann on "Diphtherite," all of whom, as is known, assert the identity of the true croup and diphtheria, and we must confess that, by the light of our rather small individual observation, we could not gainsay their declaration; but, on the contrary, had our faith considerably shaken as to the correctness of our American and English schools of pathology, which assert the existence of a clear difference in the essential nature of the two maladies.

* A Treatise on the Principles and Practice of Medicine, by Austin Flint, M. D., p. 227. Lea, Philadelphia, 1866.

† Ibid., p. 822.

One of the marked lines of distinction, as laid down by nearly all English and American writers, failed totally, in this instance, as we had previously seen it do some two years previously, in the case of the child of a physician, which perished of diphtheria, which we saw several times in consultation. In neither case, although a quantity of diphtheritic pellicle covered the fauces, was the breath of the patient the least fœtid during its presence or subsequent to its exfoliation. We looked forward to the sequel of the second, the croupal case above recorded, with considerable interest, as to whether its convalescence would be marked by the profound debility and partial paralysis of the first; the diphtheritic one. The striking difference between the two here causes me to still adhere to English and American pathological ideas rather than to those of the French.

ORIGINAL CORRESPONDENCE.

"Sit mihi Fas scribere audita."

St. Elmo, Ky., 1874.

A Remarkable Case of Comminuted Fracture of Cranium—Recovery.

Professor E. S. Gaillard:

Dear Doctor,—As all serious cases of injury to the brain or cranium are of more or less interest to the Profession, a brief history of a case, recently under my care, may not prove uninteresting to the readers of the Journal. Considering it a very remarkable case on account of the gravity of the injury, as well as the unique and rather novel manner in which the wound was inflicted.

I had intended to report it for the November number of your Journal, but a pressure of professional work has prevented until now.

On the 1st of September, 1873, I was called to see Tommie Vandavere, with the message, "Doctor, come quickly; a cow has hooked out his brains." On my arrival—about 8 P. M.—in company with my nephew, Mr. E. H. Thomas, medical student (at present attending your College), I found Tommie to be a little mulatto, aged six years.

The history of the case, as given me by his parents (both very intelligent for rural negroes), was, in substance, that three other boys had taken by the tail "Old Brindle," a poor scrub cow, whose horns projected anteriorly about six inches, turning upwards at an angle of about forty-five degrees, and terminating in very small points. The boys, assisted by those terrible tormentors of all the horse and cow kind—the flies—proved too much for the equanimity of "Old Brindle's" temper; as a consequence, she became intensely excited, so much so that it is presumed she was bordering on a state of desperation. Tommie, was only a looker-on, but, of course, boy-like, enjoyed the sport hugely. As the cow and her tormentors went around one side of a log stable, Tommie went around the other to "head" her, and he and "Old Brindle" collided, just as she was performing some up and down movements of her head, causing the sharp point of one horn to enter the inner canthus of the left eye, penetrating the roof of the orbit, passing upwards beneath the left half (near median line) of os frontis, making its exit about the suture of left parietal and frontal bones, just in edge of scalp (patient having a high forehead), fracturing the frontal bone from inner angle of orbicular arch to frontal border; or, in other words, from entrance to exit of horn, tearing skin off forehead and a portion of scalp and fracturing frontal bone to within half an inch of external angle of orbital arch, throwing the whole back as a door on its hinges, the skin of the temple forming the hinge. The horn ploughed, as it were, a furrow in the anterior lobe of the brain. I should have stated that the fracture made near the median line was irregular, leaving midway between the point of entrance and exit a triangular point of bone, the base of the triangle attached to the right half of the frontal bone. The upper eyelid was detached beneath the brow, for two-thirds of its width from nasal border outward. Assisted by Mr. E. H. Thomas, with only the light of a kerosene lamp to guide me, I carefully removed all clots, together with about a teaspoonful of brain. I then dissected the fractured bones or pieces, four in number,

from the scalp. After carefully replacing the skin, with the portion of scalp detached, over the exposed brain, I closed the wound with nineteen interrupted silk sutures. Being perfectly satisfied that the eye was entirely destroyed, I made no examination, but simply reünited the upper lid where detached by two sutures, and covered the whole with water-dressing.

In answer to his mother's anxious inquiry as to the prognosis, I said I would not give a nickle for his chance. I should have stated that the patient was in a semi-comatose condition during the operation, there being sufficient insensibility not to require the administration of an anæsthetic. He did not complain but once, and that while introducing the needle near the nose, while uniting the eyelid.

September 2d.—Visited by Mr. E. H. Thomas; found the patient perfectly rational; little fellow related to him the account of the accident, in substance nearly as given above, adding: "At first, I thought I was killed; but after lying awhile, I thought I was not; so I got up and came to the house." His parents stated he walked to the house, a distance of one hundred yards, and climbed over the yard fence.

September 3d.—In company with my nephew, I visited our little patient, and, to my surprise, found him doing well. No fever; very cheerful; no complaint whatever; bloody serum oozing from beneath the eyelids. After cleansing the parts as well as I could, I proceeded to examine, as I thought, the socket or orbital cavity left empty after the bursting of the ball. Imagine my astonishment, on raising the lid, to discover the eyeball, only slightly dislocated outwardly, but uninjured. I replaced it by means of the flat handle of a dissecting-knife. Ordered sulph. magnesiæ as an aperient, and water-dressing continued.

September 5th.—No fever; patient perfectly rational.

September 8th.—Patient still doing well; wound healing; no suppuration, except from eye, the lids of which were enormously swollen.

September 10th.—Patient as before; tumefaction of lids sub-

siding; a quantity of laudable pus was running from between them.

September 15th.—Tumefaction of lids entirely disappeared.

September 20th.—Removed sutures from wound, which had healed by first intention.

Up to this date patient had lost the sense of smell entirely, being unable to distinguish aqua ammoniæ, FFF., from water; but to-day he could tell the difference very readily. For the first time, I discovered the inability of the levator palpebræ superioris to exercise its office of elevating or raising the upper lid; but by lifting it with finger and thumb, he could see as well as ever. Traumatic ptosis the result.

September 25th.—Patient convalescent; perfect recovery, except his inability to raise the upper lid by its own volition. Ptosis still existing up to the present time.

The points of special interest in this case are the entire absence of fever from first to last; only temporary, and then but partial, insensibility. Unless the fall backwards was of sufficient force to produce concussion, there was no cause. There was no compression, as the bone was lifted by the horn from off the brain. This little boy is very sprightly, and there does not seem to be, as far as I can discover, any impairment of a single intellectual faculty. Will the portion of bone removed ever be reproduced?

The periosteum, I endeavored, as much as possible, to dissect with the skin from the fractured bones, as it is thought to possess the power of reproducing bone; as first, I believe, demonstrated by M. Béclard, and afterwards more fully by M. Olliér.

Yours truly, J. P. Thomas, M. D.

P. S.—This case should have been more properly termed a compound comminuted fracture. J. P. T.

Springfield, Ky., Feb. 6, 1874.

Dr. E. S. Gaillard:

Dear Doctor,—It may be premature to say anything about it, but I have obtained some remarkable results from the use of

chloride of propylamin in cerebro-spinal meningitis. The intense headache was relieved, as also the pain in the back of the neck, and in such of the joints as were affected. It seemed to arrest the development of meningitis, cerebral and spinal, controlled the action of the heart, and produced sleep apparently by its anodyne action. I have used it in two cases with the foregoing results, and although the patients are not well, I consider that I have the disease under control. The additional treatment consisted of large doses of quinine and morphine. I may add, that early treatment consisted of quinine and morphine, and the propylamine was adopted with the hope that it might relieve the very intense pain in the head and neck. The eruption was present in one case. I had previously attended a case which was very violent and terminated fatally on the ninth day. Treatment of the fatal case was calomel, opium, quinine, and bromide potass. and the administration of ergot. I did not see that the ergot had any effect. The fatal case was a child eight years old; the other cases were aged seventeen and twenty-eight, respectively. All females and white.

I mention this to you to invite your attention to it, so that you may give it a trial in your cases, and with the hope that it may be found on trial to so modify the disease as to make it controllable. The formulæ I used was—

℞.—Chloride Propylamin, grs. xxx. vj.;
Aquæ Menth. Pip., ℥vj.;
Saccharæ Albæ, q. s. to sweeten. M.

Dose, dessertspoonful every two hours, and continued until the full effects of the remedy are had. When the remedy has had its full effect, and you find a dilated pupil, with recurrence of headache and pain in the back of the neck, the headache may be due to the action of the remedy, and may be relieved by a discontinuance of the medicine for a few hours. Under its use the pulse comes down and remains at a normal standard. If I have any more cases, I will write you the result.

Your friend, D. O. Polin, M. D.

WHITEHAVEN, TENN., Dec. 27, 1873.

Prof. E. S. Gaillard, M. D.:

The articles that I have read in the past twelve months, and their diversity of opinion in relation to the nature and treatment of the disease known as Malarial Hæmaturia, hæmorrhagic malarial fever—and a host of other synonymes too numerous to mention—induces me to thus address you. Not that I expect to institute a new or correct theory of the disease, or to settle different points of pathology, cause, treatment, etc.; but simply to add a few more facts, based upon personal observation and experience—in behalf of the list—so essential in arriving at a correct conclusion. Nor do I wish to be understood as differing from or denying the opinion of any one; as I attribute this diversity of opinion to the different localities and influences in and under which the disease may occur. The disease, no doubt in my mind, is the same, modified by different circumstances. I readily accept the name chosen by Dr. Wallace, in the October number of your Journal, p. 417, Hæmorrhagic Malarial Fever, as being the most appropriate in indicating the nature of the disease.

I have attended a dozen or more cases in the past three years, some of which assumed the different symptoms related by different observers.

The cause I consider, as the name implies, is due to malaria, and with the exception of one instance, have met with it only in the swamps of the Mississippi, or those adjacent, and in persons whose constitution had been previously impaired by attacks of chills. All in fact may be said to have been laboring under a chronic form of malaria from two to eighteen months' standing, with all the accompanying symptoms of that disease, such as enlargement of the spleen, torpidity of the liver, indigestion, etc.

As I report entirely from memory, suffice it to say the history of two cases will show the mild and severe form of the disease as it came under my observation.

Case I.—Miss Mollie J., aged twenty-eight sent for me in haste; I arrived at the house about 10 A. M.; learned from her sister that she had been having chills at short intervals, nearly two months, suffered with the various symptoms incident to malaria, menstruated regularly and about a week before; was taken with a chill about 7 A. M. July 7, 1870; complained of great coldness, and pain in the back, limbs and head, and about 9 A. M. passed bloody urine, which caused her fright. I found her with a high fever, full and bounding pulse, tongue heavily coated, skin dry and yellow, with occasional pink spots about the size of a silver half-dollar, conjunctiva congested, bowels constipated, great pain in the limbs, over her brow and in small of her back; very restless and great thirst; nausea and vomiting; and slight delirium. There was considerable tenderness on pressure over the region of the kidneys. I gave her ten grains of calomel, a hot foot-bath, had her back well rubbed with turpentine, a cold cloth to her head, and ordered an occasional sponging of the body with cold water, and the following mixture internally:

℞—Ess. Peppermint;
Tinct. Aconite Root;
Tinct. Digitalis, aa. 25 drops;
Water ℥i.

M. S.—Tablespoonful every three hours, until I returned. At 6 P. M. I found her very restless; very little fever; bowels had moved freely, and had passed about a pint of bloody urine during my absence; great pain in her back, and red spots very distinct on her legs and arms. Ordered—

℞—Sulph. Quinine;
Tannic Acid, aa. ʒiss.;
Mur Morphiæ, gr. ½.

M. Pills 12. Sig. 2 pills every four hours. Hot hip-bath; back well rubbed with turpentine.

July 8, 10 A. M.—Patient better, had several hours' sleep during the latter part of the night; continues to pass bloody urine, tongue cleaner; skin moist and no fever; red spots dis-

appeared. Ordered some nourishment, and two grains calomel; also to continue treatment; administering the pills at intervals of six instead of four hours.

July 9.—Patient continues to improve; had a good night's rest; no return of fever, and urine slightly colored; bowels moved freely. Continue treatment.

July 10.—Still improving, urine clear. Patient discharged, and ordered a tonic of—℞: Mur. Tr. Iron, Fowl. Sol. Arsenic, Sulph. Quinine, each one drachm. Dose: Ten drops ter die, in water.

I will here state that I attended the same lady the following summer with the same disease and results; also her brother, who had been residing in the bottom, and returned home on account of his health. Although the disease yielded so readily, they had a long and tedious convalescence.

CASE II.—Mr. B., aged about thirty-six; shingle-maker. I saw him October 11, 1871; learned from his wife that he had been working at his trade about eighteen months in the bottoms, and having chills about the same length of time. Had been much debilitated for several weeks, yet persisted in working; that he suffered a great deal with his back, left side, headache and constipation; that he took a dose of Wright's pills the previous night, which purged him severely, the last two operations being bloody; that he had a very hard chill early in the morning. I saw him about the middle of the day; he was suffering a great deal with nausea and vomiting, pain in his back, thirst and great restlessness; had passed a few minutes before my arrival about one and a half pints of bloody urine; skin hot, dry and yellow; conjunctiva yellow and slightly congested; pulse full and quick; tongue heavily coated; wild delirium, with a constant desire to get up. Considerable tenderness on pressure over the region of the kidneys, liver and spleen. I gave him a hot foot-bath, had his back well rubbed with turpentine, and a hypodermic injection of one-fifteenth grain sulph. morphia. In a short time he became quiet and fell asleep, from which he did not arouse for several hours. I

ordered the turpentine to his back repeated every six hours, and the following prescription:

℞—Sulph. Quinine;
Tannic Acid, aa. ℈iss.;
Sulph. Morph., gr. ½.

M. Ft. pills 12. Sig: Two pills every four hours.

October 12.—Had a bad nights' rest, passed large quantities of bloody urine; very little fever; very restless; complains of severe pain in his back; skin a little moist; pulse quick and weak; great thirst; no appetite. Continue pills every five hours instead of four.

October 13.—Patient no better; growing weak fast; continues to have bloody discharges. Continue treatment every six hours instead of five; nourishing diet and stimulants.

October 14.—Very little change.

October 15.—Urine not so dark; expresses himself as feeling better. Suffice it to say, the treatment, with such additions as suggested themselves, was continued several days, and he gradually improved, and was discharged at the end of twelve days, and put upon iron, quinine and arsenic as a tonic. At the expiration of about three weeks he relapsed and died. I did not see him, on account of sickness in my family; but was informed by my worthy friend, Dr. Bynum, who saw him, that the relapse was owing to his great imprudence.

The above cases are a fair representation of those I have met with so far as I can collate from my memory; the last mentioned being the only one that died. The great restlessness occurring in these cases was a very prominent symptom, and can be compared only to that of cholera or yellow fever. I would also call attention to the hæmorrhagic tendency in this disease, the gums, bowels, nose, and eyes often participating.

I will not pretend to enter into the pathology, as time and space forbid. If I have succeeded in any wise in attaining the great end, however small, I will consider myself abundantly paid for my labor.

Very respectfully,

Sam. L. Rains, M. D.

ROCKFORD, ILL., Feb. 8, 1874.

Dr. E. S. Gaillard:

Dear Sir,—Among the many intractable "opprobria medicorum," there is certainly none that more deservedly merits the title than chronic facial neuralgia. It is not in the expectation of adding another to the list of numberless "specifics" for this affection that the present communication is written. There is, doubtless, in this disease, as in many chronic neuroses, actual *molecular* nerve change, quite inconsistent with absolute recovery—that is, with a recovery up to a normal standard of previous nerve health. In a recent case, for example, of section of the submaxillary nerve for inveterate neuralgia, in one of my patients, the neurilemma was thickened and the nerve tubules quite pulpefied. But there is a remedy, or combination rather, which I have lately been using with a success which is certainly more than a coïncidence, in a large number of cases. It is the combination of ergotine with the phosphide of zinc. The property and power of ergot to modify capillary circulation, its hæmostatic effect suggested to me its influence on the flushed and turgid appearance of face, consequent on vasomotor debility, which we almost invariably meet in this malady. Of course the decomposition of so unstable a salt of zinc as the phosphide, furnishes a ready means of presenting phosphorus in a nascent, and therefore an assimilable form of food to the "hungry nerve," as Romberg styles it. The formula I use is—

Ergotine, ℥j.;
Zinci Phosphidum, grs. v.

Ft. massa in pil No. 60 div. S. One after meals.

This pill is nearer a "specific" than anything I have used yet.

Very respectfully,
EDWARD C. HUSE, M. D.

SUISUN CITY, CAL., Feb. 2, 1874.

Dr. E. S. Gaillard:

Dear Sir,—As I see your friends from different parts of the country report to you cases presenting anything unusual, I

thought I would report that of a little patient of mine. Should you think it of sufficient interest you may publish it in your Journal. The case is this:

A female child, born four months ago, healthy, and of healthy parents, has the misfortune to have no patella on the left knee, otherwise the leg is perfect; other bones all right; no shortening. The knee-joint has no motion backwards; impossible to carry the leg below the knee a particle back beyond a straight line with the thigh. Can be flexed forward with ease and without pain, till the foot rests on the thigh. Place the child upon her feet, and one knee goes forward and the other backward. I stated that nothing could be done for them till the child was large enough to walk, when, by a simple apparatus, the defective knee could be kept stiff, and the child could walk, but not without limping.

If any of your readers have had any experience with such a case, I would be glad to have the benefit of their experience.

Yours, very truly, JAS. F. PRESSLEY, M. D.

NEWBURN, N. C., Feb. 20, 1874.

Dr. E. S. Gaillard:

Dear Sir—The following case, indicating an unusual instance of low temperature in the living human subject, lately came under my observation. Visited, February 5, 1874, Lana Bryan, colored, aged thirty-five; married; mother of two children; aborted about seven years ago; has not since been pregnant. Was seen six weeks ago by my brother, Dr. F. Duffy, who diagnosed fibroid degeneration of uterus, with some quite large subserous outgrowths. Had lost large quantities of blood during the twelve months immediately preceding October last, when hæmorrhage ceased. Rectal and vesical tenesmus now formed an annoying element in her malady, and has continued up to the present time, except when temporarily relieved by the use of belladonna and opium suppositories. Urine almost constantly dribbles, and mucus from rectum discharged with every bearing-down pain. Tumor fills pelvic cavity and ex-

tends five or six inches above symphysis pubis. Left lower extremity much swollen, in consequence of obstructed iliac vein. Patient rational, readily answering questions; very weak, pulse 56, feeble; temperature in mouth and axilla, 84° F. I was fortunate in being accompanied on this occasion by my friend, Dr. Atmore, and having thereby the advantrge of trying two thermometers, as well as *his* assurance that *he* could not get a higher indication than 84.

This patient died on the following day, twenty-four hours after the observation. Residing, as she did, some miles in the country, and no intelligent person near to whom might be entrusted the care of making further observations, nothing is known of the subsequent course of her temperature. No post-mortem was allowed. The distressing irritability of rectum and bladder, to say nothing of moribund condition of patient, rendered a rigid physical examination impracticable, so that in speculating on the immediate cause of death, I can not exclude hæmatocele from complicity, nor even pyelitis, due to compression of the ureters. I have since learned from the husband of patient that urine ceased to pass soon after I left his house.

I am not aware of a single instance of like extreme diminution of temperature, except in cases of the severe collapse of cholera, always rapidly ending in death.

C. Duffy, Jr., M. D.

Nashville, Tenn., Feb. 12, 1874.

Dr. E. S. Gaillard:

Dear Doctor,—Within the past three days I have resorted to Esmarch's bloodless operation in two cases of necrosis of the tibia; one in a girl eleven years old, the other a soldier wounded at Missionary Ridge. Every professional gentleman present expressed his great gratification at the perfect success of the method, and desired just such means to carry it out practically. The apparatus I used cost me, tourniquet and all, less than $2.

Truly yours, Paul F. Eve, M. D.

CHULAHOMA, MARSHALL CO., MISS., 1874.

Dr. E. S. Gaillard:

Dear Sir,—I send you notes of a case of ovariotomy performed by myself:

February 9th.—Visited Mrs. J., aged about — years, in consultation with Drs. Sharpe, Mims, and George A Wilson; diagnosis, ovarian cyst; made exploratory puncture with hypodermic syringe; drew off one and a half ounces fluid; dark color; treated with nitric acid, heavy albuminous deposit.

February 13th.—Bowels emptied by cathartic.

February 14th.—Bladder emptied by catheter; and, assisted by Drs. J. W. Sharpe, Wm. Mims, Geo. A. Wilson, L. J. Wilson, J. P. Wilson, and Williams, proceeded to operate; anæsthetic one part chloroform and two of sulphuric ether. Incision from near umbilicus to pubic arch; evacuated three cysts; fluid highly albuminous; measured five gallons; strong adhesions to liver, spleen, omentum, ilium, for about six inches, and descending colon; incision enlarged four inches and adhesions separated; *very* short pedicle; compelled to introduce fingers into the abdominal cavity to secure it; pierced the pedicle with Glover's needle, armed with double flax ligature; cut the ligature, removed the needle, and tied with two ligatures; dropped the pedicle back into the wound and left ligatures hanging out at lower angle of the wound; closed the incision with metallic sutures, hair-lip pins, and adhesive strips, except in lower angle, in which a tent was placed to keep wound open for drainage purposes, provided it should be required; roll of lint applied over the wound, and abdomen enveloped in many-tailed flannel bandage. Patient removed to bed. Length of operation 85 minutes. Skin cold; pulse very rapid and feeble; gave one ounce tr. opii and sp. ammoniæ comp., well diluted; warm irons to the feet. In the course of an hour the patient reacted finely; skin warm; pulse 140.

℞.—Pulv. Opii;

Pulv. Camphoræ, aa grs. x.

M. Ft. in mass. et in pil No. 10, div. One every two hours.

Under the use of the above recipe, the patient passed a comfortable night, with the exception of three or four spells of vomiting.

February 15*th.*—Continued treatment; still occasional vomiting. During the night of the 15th pulse ran up to 160, and extremities became cold; ℞.—Whiskey and milk; patient reäcted.

February 16*th.*—Patient cheerful; requiring catheter every three or four hours; pulse 140. Treatment continued, with addition of bird soup, which she craved, and milk mixed with lime water. Still occasional vomiting; egesta very acid. ℞.—Creta. Prep., grs. vj., every three or four hours. Vomiting becoming more frequent, we resorted to $\frac{1}{6}$ gr. morphia hypodermically; vomiting continued. 3½ o'clock P. M., pulse 145; 4 o'clock P. M., pulse 150. ℞.—Whiskey and ginger tea. 5 o'clock P. M., pulse 140. During the night vomiting increased, in spite of hypodermic use of morphia, ice, etc.; pulse ran up to 160.

February 17*th.*—6 A. M., pulse past counting; hippocratic countenance; extremities cold; pupils dilated; patient perfectly rational; vomiting distressing. 8 o'clock P. M., patient died of nervous prostration. W. F. Hyer, M. D.

Louisville, February, 1874.

Dr. E. S. Gaillard:

My Dear Sir,—May I suggest through the columns of your Journal to the many hundreds of medical men in the United States who have the name of Henry Miller on their diplomas, that they could honor this great and good man by each one of them contributing a dollar for the purpose of erecting a monument to the memory of their illustrious and beloved master. This sum could easily be given by each pupil, and it seems to me that it would give them exquisite pleasure to be thus able to honor him who has been the recipient of so much honor from the medical world, both at home and abroad.

Yours, Robert Durrett, M. D.

HOUSTON, TEXAS, Dec. 30, 1873.

Dr. E. S. Gaillard:

Dear Doctor,—Please have the kindness to tell me at your earliest convenience, if you ever knew of anthelmintic properties in either strychnia or columbo? A few days ago I prepared for one of my patients the following—

℞.—Chryst. Strychniæ, gr. i.;
Rad. Colum. Pulv., grs. xxxvi.;
Ext. Hyoscyam, q. s.;
Ft. pil xii.,

of which one was to be given every two hours. The administration thereof caused the expulsion of a whole "tænia mediscanellata," unexpected to the patient and myself. The poisonous effects of strychnia can not have caused the expulsion, as the different fragments kept alive until cold and stiff, some considerable length of time after the expulsion.

If you find this worthy to appear in your Journal, you may make use of it as you think best. I thought it worthy of notice, as I never heard of a similar case. The patient having been treated for years by different and able physicians, in different countries, even in Europe, for different diseases, and all in vain, is now entirely well. Yours, very truly,

T. B. LAUT, M. D.

OTHELLO, MISS., Jan. 3, 1874.

Dr. E. S. Gaillard,

Dear Sir,—I have received your Medical Journal (December number), in which I find Dr. Sumrall's advertisement for patients suffering from an umbilicus, and as I am now treating a patient suffering from an umbilicus, I wish to know if he makes the umbilicus a specialty. Very respectfully,

SAMUEL JOHNSON, M. D.

P. S.—If Dr. Sumrall has completed his negotiations for the St. Louis Fair Grounds, I will send forthwith, as the case will not admit of delay. S. J.

JERSEYVILLE, ILL., Feb. 9, 1874.

Prof. E. S. Gaillard:

Dear Sir,—In the January number of your Journal in Art. III., by Dr. Fields, on "Puerperal Eclampsia," hyd. chloral is very highly recommended, and on page 29 he says: "I would thank any member of the Profession who will take the trouble to communicate his experience in the treatment of the disease that forms the subject of this article, or in regard to the action of chloral."

Without giving detailed accounts of cases, I would simply say that in my practice nothing has ever filled the place of hyd. chloral in eclampsia, but I frequently give grs. xx. for a dose. I also find it beneficial as an anti-spasmodic on the rigid os uteri in parturition, in spasmodic asthma and in spasms in children from dentition. Facts from practical men are worth far more than pages of fine-drawn theories.

Respectfully yours, J. O. HAMILTON, M. D.,
Ex-President Illinois State Medical Society.

MARYVILLE, TENN., February 12, 1874.

Dr. E. S. Gaillard:

Dear Sir,—I notice in the January number of your Journal an article from Warren, Me., signed B. T. Buxton, M. D., who says that he had a case of suppression of urine for eleven days, without any organ of the system performing the function of the kidneys. I would ask the Doctor if the patient he refers to had any discharge from the bowels, or any perspiration from the skin? If that patient had any perspiration or expiration, some of the functions above stated were performed so as to enable the patient to live the time mentioned without micturition. Now when the kidneys fail to perform their natural function, some of the other organs of the system perform it for them until they assume their natural functions again, or at least in the majority of cases.

Yours respectfully,
JOHN BLANKINSHIP, M. D.

LITTLE ROCK, ARK., Jan. 1, 1874.

Dr. E. S. Gaillard:

Dear Sir,—In an operation for the removal of staphyloma by the plan of Borelli, which I recently performed, I substituted the Russian hog bristles for the needles, as practiced by that author, and as the result was all that could have been desired, it is but right that I should give the Profession the benefit of the suggestion. I selected two of the firmest and straightest bristles that I could find, and gave them a curve on the distal end by drawing them between the thumb-nail and index finger, then placing them on a soft piece of wood, with a scalpel I pointed them at an angle of about twenty-two degrees near the root on the side of the lesser curve. The curve on the distal end indicates the side the curve is on. By slight pressure and semi-rotation, there is no difficulty in passing them through the cornea. The side the point is on (being indicated by the side of the lesser curve) being kept toward the surface. The advantage in dressing of the flexible bristle over the stiff needle needs no comment. I clipped a little off of the distal end of the bristles after they were introduced, but I regretted it afterwards. The longer they are left the better.

D. H. DUNGAN, M. D.

GOSHEN HILL, UNION COUNTY, S. C.

Dr. E. S. Gaillard:

Sir,—I can not support a Journal that advocates a social reünion with the northern section of the Medical Association under the circumstances.

Very respectfully, etc.,

G——— D———, M. D.

PROCEEDINGS OF SOCIETIES.

"Etsi non prosunt singula, juncta juvant."

Boyle County (Ky.) Medical Society.

The following resolutions were introduced before the Boyle County Medical Society of the State of Kentucky, on February 3, 1874, by Dr. Jackson, seconded by Dr. McKee, and passed unanimously:

Resolved, That the Boyle County Medical Society hereby expresses its hearty commendation of the recent memorial of the American Medical Association to Congress in support of a bill to increase the efficacy of the Medical Department of the United States Army, now before that body.

Resolved, That this Society considers the passage of said bill simply as an act of justice to one of the most important branches of the military service, composed as it is of gentlemen of the highest professional attainments and general culture, and whose duties are not to be outweighed in responsibility by any other arm of the service; that the members of it should hold the same rank and enjoy the same emoluments as members of the other Staff Corps of the army.

Resolved, That we respectfully urge upon the member of Congress from this Congressional District the support of said bill.

Resolved, That an authenticated copy of these resolutions be forwarded to the Hon. H. J. Dunham and the other Congressmen and Senators representing the State of Kentucky in Congress.

Resolved, That these proceedings be sent for publication to the two medical journals published in this State. W. B. Harlan, President.

W. C. Tucker, Secretary.

Linton District Medical Society.

The Linton District Medical Society will meet in Louisiana, Pike county, Mo., April 7th and 8th, 1874.

H. H. Middelkamp, Secretary.

CHEMICAL AND PHARMACEUTICAL.

"Diruit, ædificat, mutat."—Hor.

Clinical Chemistry of the Urine.

The reporter from Italy, Dr. Sammut, communicates some ex-

tracts from a work on Clinical Chemistry by Professor Primavera, of Naples, from which we extract the following:

In the paragraph on the *chlorides*, their great diminution or disappearance is shown to be entirely destitute of importance, either for diagnosis or prognosis, inasmuch as such is clearly demonstrated to be merely the effect of the lengthened, severe and poor diet to which patients, suffering from pulmonary diseases, typhus, etc., are subjected, in whom especially it is the custom to verify the condition of *achloria*.

In the paragraph on the *phosphate of lime*, the general law is established of its rapid diminution even to total disappearance from the urine of all fever patients, to reäppear when recovery is established. An exception to this law is made in the case of those acute rheumatisms which are not rapidly resolved, and of all of those fevers which tend to the irritation and inflammation of the great nervous centres and their involucra (the brain, spinal marrow, meninges); for there the phosphate of lime reäppears in the midst of the disease, and is even present, most generally, in great abundance.

In the paragraph on the *phosphate of magnesia*, another law, completely new, is established, which is, that in all the severe fevers, and especially in the fever of pneumonia, and in typhus, this salt first diminishes to total disappearance during the period of increment, and then reäppears in great abundance when the resolution has commenced. Also, the author has found this same salt much increased in muscular progressive atrophy.

In speaking of the *phosphates in general*, the reägent which is considered the best is the following, which is not new with regard to the nature of its components, but rather as regards the proportion in which the same are employed, by which this reägent is freed from the serious inconvenience of precipitating also the carbonates. It is prepared with three grammes of simple sal ammoniac, one of sulphate of magnesia, four of liquid ammonia, and sixty of distilled water.

For the analysis of the *ammoniacal carbonate* the following method is employed: A test-tube is filled to about half its-

length with the suspected urine: upon its open extremity is laid a small piece of litmus paper, slightly reddened and moistened, and the liquid is heated to ebullition; after a few moments, if an ammoniacal carbonate is present, the paper resumes its blue color.

In the paragraph on the *urates* there is a very simple method for discovering the abundance of these salts, where they remain dissolved even after the cooling of the urine. It consists in adding to a sample of the latter a couple of drops of hydrochloric acid; a cloud that appears more or less rapidly and copiously, and disappears on the reäpplication of heat, indicates that the urates really exist there in abundance. With regard to the clinical value of these salts, we are pleased to record one fact which is entirely new, which is that in the course of typhus they indicate an aggravation when they become scarce, and an improvement when they become more abundant.

In the paragraph on *urea*, the author establishes a new method of analysis for clinical purposes, as the ordinary one, the volumetric method with nitrate of mercury, appears to him difficult and defective, inasmuch as this latter salt precipitates many other organic substances as well as urea. He accordingly recommends us to take fifteen grammes of urine, reduce them to one-fourth by slow evaporation, and to add immediately a volume of nitric acid at 40° (of the areometer of Baumé), equal to that of the reduced urine, after which it only remains to place the capsule containing the mixture to cool in a vessel of cold water. If after this the whole appears to coăgulate, so as to resemble a completely solid cake, the urea is considered abundant; if this cake exists with a moderate quantity of liquid, the urea is reckoned normal; and, finally, if no cake, or scarcely any, appears, and no trace of crystalization, it will signify that the urea is present in very small proportions. The author with this method has always obtained the last mentioned result in the urine of patients in the second or third period of chronic Bright's Disease. It is to be understood that in these cases, previous to analyzing for urea, the albumen must be re-

moved from the urine by coägulation with heat and acetic acid, and subsequently filtration.

* * * * * * *

The chapter on *albumen* is the longest of all, and, perhaps, also the finest and the most important. In it not only all the methods of analysis are passed in review, amongst which the author prefers that of coägulation by heat with successive additions of acetic acid, but also all the theories which up to the present day have been invented in explanation of the different forms of albuminuria, whether considered as passing and symptomatic, or essential and indicative of Bright's disease. Finally, in order to distinguish practically all these forms of albuminuria, he has given several criteria, of which I refer with much pleasure to the following:

1st. Urines with small amount of albumen (from one to six grammes in the twenty-four hours), more or less strongly colored, and of a specific gravity either normal, or still better, increased, exclude with almost absolute certainty the possibility of any serious injury to the parenchyma of the kidneys, and indicate, on the other hand, either certain febrile diseases, as, for example, typhus and pneumonia, or else those diseases of the heart, liver, spleen, etc., which are capable of mechanically obstructing the course of the blood in the renal veins.

2d. Urines with a medium amount of albumen (from six to twelve grammes in the twenty-four hours), somewhat discolored, and of a specific gravity somewhat diminished, indicate the first stage of chronic Bright's disease.

3d. Urines with a large amount of albumen (from twelve to thirty grammes in the twenty-four hours), much discolored, and of a specific gravity somewhat diminished, indicate, with a certainty almost absolute, the second stage of chronic Bright's disease, called hypertrophic.

4th. Urines with a moderate amount of albumen (from six to twelve grammes in the twenty-four hours), almost entirely colorless, and of a very low specific gravity, (from 1,005 to

1,010), indicate the last stage of chronic Bright's disease, called atrophic.

5th. Apart from all the above-mentioned distinguishing characteristics between the albuminuria of Bright's disease and the so-called passing or symptomatic forms, there is yet another still more important, which consists in the proportion that is found of urea and the urates; when this proportion is very small, it marks in the strongest manner the first species of albuminuria; when it is normal or increased, it marks in the same manner the other species in general.

6th. When the albuminuria is accompanied by cardiac disease, it is easy to recognize whether the former is the effect or cause of the latter; for, while in the first case, the urine has all the characteristics of symptomatic albuminuria, in the second case it has, on the other hand, all the characteristics of the second or third stage of Bright's disease.

7th. Albuminuria in acute articular rheumatism marks with great probability the development of pericarditis.

In the chapter on *pus* and *muco-pus* there is to be observed, above all, a new and very delicate method of analysis, especially useful for discovering this morbid principle in those urines that present little or no turbidity. It consists in treating a sample of urine with a few drops of ammonia, then boiling, and, lastly, giving to the vessel that contains it a movement of rotation. In this manner the small proportion manifests itself in the beginning by taking the form of a spiral, and then collects itself on the surface of the liquid in the form of a little gelatinous pellet. With regard to its clinical value, these are the principal conclusions of the author:

1st. Muco-purulent urines, which at the moment of their emission, or a few hours afterwards, have an alkaline reäction, showing the presence of carbonate of ammonia, indicate vesical catarrh; 2d, muco-purulent urines which have an acid reäction, even after several days, indicate pelvic catarrh; 3d, urines entirely purulent, with acid reäction and low specific gravity, indicate acute interstitial nephritis; 4th, purulent or muco-pur-

ulent urines in general, provided they have a specific gravity that is normal, or, still better, increased, exclude, with almost absolute certainty, the possibility of any deep-seated disease of the kidneys.—*St. Louis Med. and Surg. Jour.*

NOTE.—It is remarkable, that in this excellent paper no allusion is made to the best pus-test known: viz., that suggested by Sir Henry Thompson. This test is simple; using a double-barreled catheter, wash out the bladder thoroughly, until the returning stream of water is clean and clear; then in some small vessel receive the first urine passing through the retained catheter; if the urine contains pus, this pus manifestly comes from the kidney; if it does not contain pus, the pus observed during the previous history of the case comes, of course, from the bladder. Any catheter will answer in making this test, but the double-barreled catheter, for manifest reasons, is the best.

E. S. G.

APPARATUS FOR THE CLINICAL EXAMINATION OF URINE. By REUBEN A. VANCE, M. D., Physician-in-Chief to the New York Institute for the Paralyzed and Epileptic, etc.

It is now several years since that, as *interne* at Bellevue Hospital, it became my duty to make a large number of urinary examinations daily. For my own convenience, I constructed a sort of clinical pocket-case, containing the following articles:

An axillary thermometer; specific gravity apparatus; nitric acid bottle; two small test-tubes of different sizes, with wire to hold them; pair of forceps; platinum foil; two pipettes and litmus paper, red and blue—the whole being neatly encased in a leather-covered case, four inches long, two inches wide, and one inch thick, making, when closed, a very conveniently-sized case for the pocket. * * * * * *

These few instruments enable the physician to determine quickly, and with a great deal of accuracy: 1. The reäction of the urine—whether acid, alkaline or neutral. 2. The relative quantity of urine. 3. The relative quantity of solid ingredients. 4. The relative quantity of inorganic ingredients. 5. The relative quantity of organic ingredients. 6. The specific gravity of the urine. 7. The presence or absence of albumen.

No detailed description of these various appliances need be gone into here. The appearance of litmus paper is familiar to every medical student; and the same may be said of the urinometer, the instrument employed for determining the specific gravity of the urine.

The two pipettes should be of different lengths, so that they need never be confounded the one with the other. The smaller one is to be used with nitric acid alone; the larger one is to carry urine, and should be used for no other purpose. It is a well-known fact, that when a pipette is inserted a given length into any fluid, and the bulb of the finger placed over the other opening, it can be removed from the liquid, and carried any distance, without spilling any of its contents, so long as the upper opening remains closed. Advantage can be taken of this fact in the present instance, and the pipettes are placed in this case for the purpose of accurately measuring, and carefully carrying, small quantities of urine and acid. It will be noticed that each pipette is marked by a horizontal line, which, in the smaller one, is much nearer its lower extremity than in the larger one. The reason for this will be explained presently.

The platinum foil is simply a section of a thin sheet of platinum, and is used when it is necessary to evaporate the urine. It is also useful in testing the quantity of urea in the specimen under examination, and in incinerating the dried residue when we desire to separate the inorganic from the organic constituents. The forceps are intended to hold the platinum when in use. * * The first thing to be done is to determine the reaction of the specimen to be examined. For this purpose we employ the urine-glass in which we subsequently place the urinometer, when testing the specific gravity. Two pieces of litmus paper—one red and the other blue—are placed in the bottom of the glass, and a quantity of urine is poured upon them. The normal urine being acid, in the majority of cases both pieces will present the same color—red. But in certain cases the urine is alkaline when voided, and in certain others it becomes alkaline from decomposition, and then the reverse will

obtain—both pieces will appear blue. Great care should be taken in keeping the urine-glass clean, and free from acids especially, otherwise the results may be vitiated.

To determine the amount of urea in the specimen, place a single drop of urine (which is to be taken from the bottle with the large pipette) on the platinum foil, which, with the aid of the forceps, is to be held in the left hand, and, with the small pipette, add an equal quantity of nitric acid. In normal urine no immediate effect will be produced, but should there be an excess of urea, crystals of the nitrate of urea will at once make their appearance. In proportion to the excess of urea, this process of crystalization will be rapid and extensive. It will occasionally happen that the liquid on the foil will appear to solidify at once, so quick and complete will be the process. Should nothing of this kind take place, the amount of urea in the specimen is either normal or deficient. To test this latter point, clean the foil, by bringing it to a red heat over a candle or gas flame, and, with the large pipette, place upon it double the quantity of urine used in the former experiment, evaporate slowly to half of its original bulk, and then add to it an equal quantity of nitric acid. Normal urine submitted to this test will at once crystalize. Should no change of this nature ensue, the amount of the urea is palpably deficient. * * *

After cleaning the foil carefully by raising it to a red heat, as in the former case, we can proceed to test the quantity of solid ingredients present. This is to be done by carefully evaporating a given quantity of urine, and comparing the residue with that obtained from the same amount of healthy urine. The platinum foil is to be used for this purpose, and it is well to accustom ourselves to using the same amount of liquid upon all occasions. The large pipette has a mark near its lower pointed extremity which is intended as a guide for dipping out the urine for this test—the pipette should be filled exactly to that point. In evaporating the urine, care must be taken not to raise the boiling mass to a very high temperature, and in practice it will be found convenient *not* to evaporate all the liquid,

but to form an estimate from the pasty mass which is left upon the foil sometime before the last of the water disappears. The quantity of this material furnishes the observer with the data from which to form an idea of the amount of solid ingredients in the given specimen. In testing the amount of urea, continual practice is essential to enable a physician to judge with a great degree of accuracy.

The residue, which gives us our idea of the amount of solid ingredients, can be used in determining the quantities of organic and inorganic constituents, and their relative proportions in a given case. The pasty mass on the foil is to be slowly raised to and for some time kept at a red heat—the organic matter is thus dissipated. With the handle of the forceps we can gather together the inorganic ingredients which have remained on the platina, and the difference between their present size and their bulk before incineration will indicate the amount of organic matter driven off by the heat, while the residue will denote the quantity of organic materials in the specimen under examination.

The urine which was poured in the urine-glass for the purpose of testing the reaction can now be used for determining the specific gravity. The urinometer is to be placed exactly in the centre of the glass, care being taken to avoid contact between the graduated tube and the walls of the glass. As soon as all motion ceases, the figures at the surface of the urine will indicate the specific gravity of the specimen. The specific gravity of normal urine varies from 1,016 to 1,020; 1,018 being a fair average. There is an old rule, called the rule of Trapp, which while it is far from being altogether accurate, yet possesses a certain amount of truth, and is well to be known. It states that, to determine the amount of solid ingredients in a given specimen, find the specific gravity and then double the last two figures used in expressing that sum. For instance, the specific gravity being 1,018, the amount of solid ingredients is $18 \times 2 = 36$.

In testing for abnormal ingredients, our attention is drawn most prominently and forcibly to the solution of the question

of the existence of albumen in the urine. No other substance possesses such interest, or is of so much pathological importance. The commonly used tests (heat and nitric acid) are sufficiently delicate, but it is to be feared that, in their general application, their value is more or less impaired by inattention on the part of the examiner to one or more very important rules.

In the first place, the reaction should be accurately noted before applying either test. The reason of this is sufficiently obvious, when we remember that albumen is not coagulated by heat when the urine is alkaline; and that even in normal urine —much more so in a strongly acid specimen—we are liable to be deceived by an abundant deposit of amorphous urates upon the addition of nitric acid.

The reaction having been determined to be acid, the smallest test-tube can be filled one-half full of the urine under examination, and the upper part subjected to the action of heat. The wire-handle will now be found of great service in holding the tube over the candle or gas flame. This test is especially satisfactory in cases where the specimen is more or less opalescent from the deposits of the urates. Heat alone will speedily clear up the solution, and the upper transparent portion will contrast strongly with the cloudy lower layer. The albumen, should any be present, will not coagulate until this change has taken place, and will then declare itself as a beautiful white circle at the upper part of the test-tube, which will persist after the addition of nitric acid. The turbidity commonly produced when neutral or alkaline urine is submitted to the action of heat (due to a precipitation of the earthy phosphates) is readily distinguished from that of coagulated albumen, by the fact that the former disappears instantly upon the addition of nitric acid.

The test of universal applicability is that of nitric acid. The reaction of the urine does not interfere with its operation—it is equally efficacious in acid or alkaline solutions. But one caution is necessary, and that is, in highly concentrated urine a deposit of amorphous urates will occasionally follow its addi-

tion, and produce a turbidity which might be mistaken for albumen. "The two conditions are, however, easily distinguished by observing the level at which the cloudiness begins, and the direction in which it spreads. Albumen begins to coägulate immediately above the stratum of acid, and the turbidity spreads upwards; but the urates appear first at or near the surface of the urine, and the opacity spreads downwards. Heat also readily resolves the doubt, for the urates speedily disappear when the urine is warmed, but turbidity from albumen is not affected by heat."—*Roberts.*

The following simple plan is one I can recommend most thoroughly, and I doubt if those who adopt it will often find themselves disappointed with its facility or accuracy. It is to take the largest of the two test-tubes in this case, fill two-thirds full of urine, and add the acid by means of the small pipette. The quantity of nitric acid should not exceed five drops, and can be readily estimated by filling the pipette to the horizontal line, near its lower extremity. Then, holding the test-tube in the left hand, carry the point of the pipette to the bottom of the urine and remove the finger from its upper end. The consequence will be that the nitric acid will at once form an even, thin layer at the bottom of the test-tube, and the pipette can be removed without disturbing the contents in the slightest degree. Should there be albumen in the specimen, it will coägulate at the top of the acid, and will be at once plainly apparent. Three distinct layers can then be distinguished: First, the nitric acid; next, the coägulated albumen; and, above that, the urine presenting its ordinary appearance. If both albumen and urates are present—the latter being very common in acid urine—four very distinct layers are formed. At the bottom will be nitric acid; over it, the coägulated albumen; next, a layer of urine, in which the acid is still so concentrated that it retains the urates in solution, while it is too dilute to coägulate the albumen (Heller); and above that again, the cloudy urates. —*Exchange.*

Formula for Administering Oleum Terebinthnæ.—Drop it in as much sweet milk as the patient will take. From 1 ounce to 8 ounces of milk may be used at a dose. This mode of using turpentine I consider better than any other, from the fact that the milk covers the taste of the medicine, and especially when the mucous membrane is inflamed, as in enteric fever and other inflammatory diseases. I hope this may be adopted by the medical profession generally. Try it and see for yourself.

JOHN BLANKINSHIP.

Maryville, Tenn.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

"Judex damnatur cum nocens absolvitur."

A MANUAL OF MIDWIFERY, INCLUDING THE PATHOLOGY OF PREGNANCY AND THE PUERPERAL STATE. By DR. KARL SHRŒDER, Professor of Midwifery and Director of the Lying-in Institution in the University of Erlangen. Translated from the Third German edition by CHARLES H. CARTER, B. A., M. D., B. S., London. Vol. 1., 8vo., pp. 388. Appleton & Co.: New York. 1873.

On perusing even a few pages of this translation and comparing them with the original, one is immediately impressed with the faithfulness and accuracy of the translator; and this impression steadily deepens as the comparison is further extended and conducted through the book.

Translations of important German works are now far from rare, and are undertaken almost as soon as these have appeared in the original, and British and American physicians have at present quite ample opportunities for acquainting themselves with whatever is new and valuable in the contributions to science from the hard-working and pains-taking observers of that country.

But many of these translations give very inadequate ideas of the original works, and besides other serious defects, they are commonly disfigured by oft-recurring foreign idioms and awk-

wardly constructed sentences and an involved and obscure style; in not a few instances has it been impossible to ascertain not only what the author's meaning may have been, but even what the translator thought he meant to say.

Dr. Carter has avoided these faults, he has reproduced the author's ideas with nice precision, and has moulded his translation into terse and idiomatic English.

Schroeders' Manual of Midwifery is widely and favorably known on the continent of Europe, and has in the short space of two years reached its third edition. It is then high time the English should have access to its pages.

Accuracy and conciseness are the most striking features of this book, and it embraces the latest scientific researches on the subjects treated.

It must have been a source of great pleasure to Dr. Carter to translate, and it is certainly a welcome task to review a book with so few faults, and whose merits are so great.

The volume is not large, it contains only 382 pages, excepting the index; it is remarkable that so vast a theme and such numerous topics should have been so thoroughly discussed within such narrow limits.

But then very little space is occupied by useless illustrations, the word useless is advisedly employed, for the very many wood-cuts that in most obstetric works take up so much room, only swell the volume and cost to undue proportions. Many of them are old, have been copied over and over again by author after author, they are intended to illustrate points easily understood without them, and familiar even to beginners.

In this book numerous, copious and exhaustive bibliographical notes are found in their stead, which to thoroughgoing students can not fail to be valuable and interesting.

The table of contents exhibits a practical arrangement of the various subjects to be considered. But this arrangement, though it facilitates reference to particular points, necessarily makes their treatment at times somewhat disconnected, and in some degree detracts from the literary merits of the work.

The first part is devoted to *preliminary considerations*, embracing the anatomy of the hard and soft parts of the female pelvis. The second part treats of the *physiology of pregnancy*, with a short chapter on the dietetics of this condition. In the third part is considered the *physiology of pregnancy*, including a chapter on the use of chloroform in labor. This, while short, is excellent, and will be read with profit by those whose professional studies commenced in, and were limited to the time when the safety, morality and propriety of administering chloroform in natural labor, was still under discussion by reasonable and humane physicians. The German Professor expresses himself briefly but clearly on this point: "According to our views there is never for a moment a doubt of the advisability of chloroform in such cases, for it is one of the most pleasant *duties* of the physician to alleviate suffering."

The author earnestly urges the necessity of a *diagnosis of the fœtal positions* as early as possible after labor has set in. This is only right, but, strange to say, no allusion is made to the propriety of such a diagnosis *before* labor has begun. The requisite examinations are generally neglected, and for this very reason it is the duty of the teacher to speak with clearness and decision. In a primipara it is especially important to make a careful physical examination between the seventh and ninth month. In such persons the condition of the hard parts has not been revealed by previous labor, and an examination has in many instances discovered serious malformations which rendered early interference imperative.

It is now a well-established fact, that the position of the fœtus in utero can in most cases be made out without difficulty before labor; and it is equally certain, that by external, or conjoint external and internal manipulation, malpositions of the fœtus can be rectified.

Both are practical points, have received due attention in Europe, but many teachers of obstetrics in this country do not even allude to them in their lectures, and by the great mass of

physicians they are generally ignored in practice. The author's views on this subject are sound and practical.

Fœtal auscultation is mentioned, as a matter of course, as one of the aids in fœtal diagnosis, and the author very properly insists upon its usefulness. He also points out the valuable aid gained by this means in distinguishing between *face* and *head* presentations: "In the former the thorax lies so much in that half of the uterus which does not correspond to the back that there the heart sounds are best heard. Thus even in the first face presentation the breach is felt high up to the left, to the right of it are the small parts, and the heart's sounds are heard to the right of the linea alba. If, moreover, the occiput is felt projecting over the left pubic ramus, a face presentation is certain."

The fourth part is devoted to the "*physiology of the lying-in state*, and the fifth part to the *pathology of pregnancy*.

Under the latter caption is considered a *peculiarity of some acute and chronic diseases during pregnancy*. Among the interesting questions arising in this connection, is the effect upon the fœtus of various febrile diseases in the mother. The author agrees with Kaminsky, that an elevation of the temperature of the mother above 104° Fah. is exceedingly dangerous to the child. This may be true in cases of continued fever, but can scarcely hold good in intermittents; in these the temperature ranges much higher, and yet death of the fœtus and a premature termination of pregnancy is very far from common.

Diseases Caused by the Changes in the whole Organism during Pregnancy.—In this section some space is accorded to the vomiting in pregnancy, or rather the excessive vomiting that is sometimes observed, "hyperemesis." The article, however, is unsatisfactory, the therapeutics of this troublesome and painful symptom have not received the consideration naturally expected from the author. The remarkable effects of minute doses of ipecacuanha in many of these cases deserve mention, and it is also a little surprising that the known ute-

rine origin of this trouble has not suggested to the author the use of topical applications to the uterus for its relief. Many American physicians have long been in the habit of prescribing morphia, belladonna, and iodoform applications to the uterus for the relief of the excessive vomiting in pregnancy, and that with great benefit to the patients. The propriety of inducing premature labor in aggravated cases of hyperemesis gravidarum is plainly enforced. Among the inflammatory diseases of pregnancy are enumerated decidual endometritis, tuberous or polypous decidual endometritis, catarrhal decidual endometritis, etc.

From this it appears the decidua may become the seat of various pathological changes, but as they can not be recognized clinically, they are chiefly of pathological interest, except the last, which is also called hydrorrhœa gravidarum. It manifests itself by abnormal secretion, which accumulates between the decidua and the chorion, or between the latter and the amnion, and escapes from time to time after rupture of the reflexa.

This is the source of the dribbling of serous fluid that occurs during the latter months of gestation, though it may occur quite early. It is often mistaken for the premature escape of liquor amnii, but the latter is always followed by the commencement of labor.

The sixth and seventh parts contain the general pathology and therapeutics of parturition and the special pathology of parturition. This forms, perhaps, the most important part of the book, involving the consideration of the weightiest questions in practical midwifery. They are discussed in a clear, impartial, and able manner, and with a judgment and thoroughness in keeping with their gravity and the position of the writer.

The Cæsarean section, this "questio vexata" of obstetricians, is very fairly handled.

According to Mayer's statistics, here quoted, the average mortality is 54 per cent., the number of operations collected amounting to no less than 1,605. This operation has been

most zealously urged in Italy, but the results are not very encouraging; for out of 46 cases operated on, 41 died, giving a mortality of 87 per cent. In America, it has not been a favorite proceeding, but the success attending its performance seems to have been greater than elsewhere; for out of 12 cases reported, only 4 died, giving a mortality of only 33 per cent. The repetition of this operation upon the same woman gives by no means unfavorable results, and it even appears that in such cases the prognosis becomes better; according to Kayser, the mortality is then only 29 per cent. Cæsarean section has been performed, relatively, frequently twice, very rarely three times, upon the same woman, and a Mrs. Adametz has even four times been successfully operated on by Michaelis. The last time the abdominal cavity was not opened at all on account of old adhesions. Oettler, in "Greitz," communicates a case where he successfully operated four times upon a ricketty woman, and in the "Revue Therap.," of the 15th September, 1870, a similar case is recorded.

Very closely connected with this operation is the important subject of malformation of the pelvis; and to its consideration the author gives most careful attention. Indeed, it is not an exaggeration to state that he goes into it at greater length and with more minuteness of details than is accorded to any other part.

The various obstetric operations, version, application of the forceps, and craniotomy, their indications, and the proper manner of performing them, are discussed ably and with remarkable clearness and conciseness. It is, however, somewhat remarkable that one so familiar with American obstetrical literature as Dr. Schroeder has shown himself to be, should have enumerated the various instruments for performing craniotomy without the least mention of Prof. T. G. Thomas' perforator. Then a lengthy account is given of Barnes' "wire loop," which is very slow and tedious in its application and working, and, according to his own work, "is more difficult and requires more skill than the Cæsarean section." It is rather strange to omit

the name of this instrument, which, for safety, simplicity, efficacy, and universal applicability in every case where craniotomy is indicated, is unequaled, or at all events, unsurpassed by any other.

In regard to the forceps, the views of the author seem to be condensed in one short paragraph, the justness and good sense of which are apparent to all who have knowledge and experience enough to entitle them to an opinion on the subject. "Where the expulsive stage is too much protracted, the loss of strength and the excitement of the woman are greatly increased; moreover, since the chances of the child are *cæteris paribus*, greatly lessened by the protracted labor; we deem it justifiable not to postpone the application of the forceps until the life of the mother is seriously endangered, or until the frequency of the fœtal heart-sounds has permanently diminished, but at once to fulfill the happiest duty of the physician, by abbreviating the enervating labor and pain of the mother by employing the forceps, provided always that this abbreviation itself can be made without danger to the mother or the child."

The account of prolapsus of the funis and the treatment, fall somewhat below the expectations raised by the reading of other parts of the book. Clearness of style and judgment are less apparent here than elsewhere.

In recounting the different modes of treatment adopted to effect the reposition of the cord, change of posture is necessarily mentioned; but the student looks in vain for adequate and satisfactory direction how to proceed, only references to this or that "porte cordon," Brown's, or Robertson's, or Schmeisser's, are given. In fact, the author is not over sanguine as to the success to be expected in these cases from reposition, which he declares is often a work of the Danaidæ.

One can not help contrasting with these vague, indefinite, and discouraging statements the clear, definite, and satisfactory directions of an American writer, Professor T. Gaillard Thomas, of New York. The following short, practical rules are laid down by him in his excellent paper on "The Postural

Treatment of Funis Presentations," read before the New York Academy of Medicine:

"1. If the cord be detected before the waters have broken, let no manual assistance be offered, but place the woman at once in position (elbows and knees) and trust to this for its return to the uterus.

"2. Should the waters have flowed away and left the cord below the head, place the woman in position and push it up with the hand, if practicable, or with the porte cordon, if not so.

"3. Let no manipulations be commenced until the woman be placed in position.

"4. In returning the cord into the uterus, the whole hand should be introduced into the vagina; this is essential to success; the fingers alone will fail."

By observance of these rules many children have been saved who would otherwise have been lost. Before the principles involved in this plan of treatment were so forcibly set forth by Professor Thomas, the mortality of the children in funis presentations was enormous. Shroeder remarked: "To the child it is one of the most dangerous complications, and in head prepresentations, without suitable assistance, it almost always causes its death." But when the postural treatment is resorted to, as indicated, the result is quite favorable, and comparatively few children are lost.

It is difficult to understand how the author could have failed to be informed of this procedure, or appreciate the benefits to be derived from it.

The eighth part concludes the volume, and is devoted to the *Pathology of Child-bed.*

Throughout the whole fifty pages occupied in "the consideration of puerperal fever," and allied affections, the attention of the reader is completely riveted, and he scans page after page with unflagging interest. This is, perhaps, the best part of the book, and it alone would make the volume a desirable and valuable addition to the library of a physician.

It is very evident in many of the earlier chapters that the

book was intended to be what the author calls it, "A Manual of Midwifery." But in the final chapters on puerperal fever, there has been more elaboration than is noticed elsewhere, excepting those on pelvic malformations; and besides being fully up to the times, they are, perhaps, in style, as well as in matter, more attractive than several other portions of the work.

Under the common name, puerperal fever, are included a group of diseases, distinguished by an acutely fatal course, or at least a tendency to such, and by being all due to infection by septic material. The history of the disease in ancient times and up to the present day, is of great interest, and forms a very appropriate introduction to the study of it.

In speaking of the different theories brought forward to explain the occurrence of puerperal fever, the author mentions first the two which more recently have divided professional opinion:

According to the one, puerperal fever is due to a miasma formed by the crowding together of puerperal women, and according to the other, it is due to the absorption of septic material. The purely miasmatic theory he regards as quite untenable. According to it, puerperal fever is due to infection, with a specific material formed under atmospheric, endemic, and telluric influences, which, acting exclusively upon puerperal women, causes puerperal fever, so that this disease really becomes a malarial fever; but this view he states to be not only unsound, but also almost universally abandoned.

A third theory is entertained to a limited extent, which holds that puerperal fever is miasmatic in origin like typhus, and that under certain conditions the diseased organism may reproduce the virus and propagate it to other predisposed individuals with outthe original miasma being still active, so that in the course of a miasmatic disease a *contagion* is generated and propagated to others as the determining cause of the disease.

That puerperal fever, in its various manifestions, is due to absorption of septic material by the surface of a wound, the author regards as the most generally accepted opinion. He declares that

few questions in etiology can be used in a more conclusive manner than this has been, and that whoever, in the face of all that is known on the subject, still doubts the possibility of the origin of puerperal fever by the absorption of decomposed organic materials, is not to be convinced.

The origination of the "septic" theory of puerperal fever is duly accredited to the English, and the author modestly says, "it has been still further worked out by German physicians."

As already suggested, he includes under the term puerperal fever, all those diseases of puerperal women, which are caused by the absorption of septic matter; that is, organic substances in the process of decomposition.

It is not denied that a prolonged sojourn in an atmosphere loaded with gases, the product of organic decomposition, may give rise to chronic illness; but, as a rule, septic matter does not, as such, enter the blood through the intact skin or mucous membrane, through the lungs or intestinal canal. Hence, the author believes that absorption does not take place unless there is a fresh wound, by which the septic matter may enter. Fresh wounds exist in every puerperal woman. Some of the maternal blood vessels are always opened up by the detachment of the placenta, and in almost all these there are slight lacerations of the cervix and vulva.

Infection may take place from absorption of septic matter, the result of decomposition of maternal parts during or after delivery. This the author calls auto-infection. As infection may come from without, as when septic matter is brought to the recent wound of the genital organs by means of sponge or tents, or instruments, or by the examining finger.

He admits the possibility that septic substances floating in the air of the lying-in room may come in contact with the recent wound; but, on the whole, considers that there are no cogent reasons for such assumption.

After all, then, puerperal fever is simply "poisoning with septic matter from the genital organs"; the disease has nothing "specific" about it; and whenever products of putrefying or-

ganic matter enter the living tissues, the consequences are essentially the same.

Erysipelas, pyæmia, ichorrhæmia, septicæmia, and puerperal fever have no specific differences between them; the last is essentially the same state as the four preceding.

There are, of course, differences and modifications of symptoms, but these are due chiefly to the peculiar place where the septic material enters, and in a lesser degree to the changes in the genital organs in the puerperal state.

Infection with septic material arising from the female genitals occurs, as a rule, only in the puerperal state, but the author states also that it may, in rare cases, be seen after gynæcological operations. The train of stages is the same in both. Lastly, he calls attention to a fact not generally borne in mind—namely, that septic infection can also be transferred to the newly-born child, and that its action is most frequently favored by the action of the umbilical wound.

The pathological anatomy of the disease, usually so imperfectly set forth, the author treats at length and with great clearness and ability; eleven pages are devoted to the consideration of this part of the subject.

Erysipelas malignum, puerperale internum of Virchow, parametritis, phlegmasia dolens, embolism, peritonitis, etc., and that somewhat less intense form of infection characterized simply by fever, all these, and in fact everything connected with the pathological anatomy of the disease is as fully treated as possible within the space allotted.

The symptomatology, prognosis, diagnosis and treatment of puerperal fever are successively considered, and the book closes with a chapter on diseases of the puerperal state not dependent upon infection.

The book is truly a *multum in parvo;* in no other work can the young practitioner find so much information in regard to most recent investigations in obstetric pathology and the views to which they have led; and the older physician, hard-worked and with little leisure to read, in danger of lagging behind the

times and the science in their rapidly advancing strides, will find in it an interesting, easy and efficacious means of averting these impending evils. J. A. O.

GRIFFITH'S UNIVERSAL FORMULARY. By R. E. GRIFFITH, M. D. Third Edition, Revised and Enlarged. By JOHN M. MARSCH, Phar. D. With Illustrations. Philadelphia: H. C. Lea. 1874.

In this work the reader finds condensed the material parts of the Edinburgh, London, Dublin, German, and American Pharmacopœias. A valuable combination. This Formulary is too well known to render any analysis of its merits necessary. It is, of course, a classic and standard work. In mercantile phraseology, "it is brought fully up to the times." Those in need of a book of formulas can not do better than by purchasing this sterling work. It is handsomely issued.

NOTE.—Mr. H. C. Lea will please accept the thanks of the editor of this Journal for always sending leather-bound specimen volumes for review. Books bound in muslin are almost valueless for constant use; the muslin becomes detached from the paste-board. It is to be hoped that publishers will read and remember this.—ED.

LECTURES ON THE CLINICAL USES OF ELECTRICITY. By J. RUSSELL, M. D., F. R. S. Philadelphia: Lindsay & Blakiston.

These lectures were, as is well known to the readers of the "London Lancet," delivered during the summer of 1870, in the University College Hospital, and published at the earnest request of the class. They have one great charm, that of being eminently practical. The writer never enters upon debatable ground, and seems to have confined himself strictly to an exposition of the clinical uses of electricity. The work is small and costs but little; at the same time is highly valuable. It is confidently recommended.

PHARMACEUTICAL LEXICON. By H. G. SWERINGEN. Philadelphia: Lindsay & Blakiston. 1873.

This work is really a Dictionary of Pharmaceutical Science.

It contains a concise explanation of the various subjects and terms of pharmacy. It is an excellent guide not only to the pharmaceutist, but to the druggist and physician. It is a work that is very useful in an office, and gives, condensed, most of the matter disseminated through large works on materia medica. The information desired is easily and quickly obtained; a great desideratum. It is well published.

DUNGLISON'S MEDICAL DICTIONARY. By ROBLEY DUNGLISON, M. D., LL.D. Enlarged and Revised. By RICHARD J. DUNGLISON, M. D. Philadelphia: H. C. Lea. 1874.

This is the last edition of this really great work. It has just been issued. The editor, the son of the great author, has made many and great improvements in it. One single fact will give a fair idea of his valuable labors in this connection; the present edition contains more than 6,000 additional subjects. Though the page has been enlarged, the work has also been enlarged; fully 100 pages. Much attention has been devoted to the derivation and accentuation of terms, and this valuable work is now also a complete pronouncing dictionary; a great advantage and a most welcome improvement. The work is beautifully issued. A deserved tribute fully and honestly paid.

PRICE'S GALVANO-THERAPEUTICS. Philadelphia: Lindsay & Blakiston. 1873.

This little book is an excellent exposition of most that is reliably known in regard to the use of galvanism in therapeutics. It is written in a plain and easy style. The subjects are so presented as to be easily understood, and the reader learns most that is taught in larger and more pretentious works. It is well issued, and the cost of it is quite small.

MISCELLANEOUS.

"Non omnes eadem mirantur ament que."

Chang and Eng.—In the present article, it is not proposed to give an elaborate history of these famous twins, but only to put on record certain well-ascertained facts of physiological interest in regard to their life, to give all that can be ascertained as to the circumstances of their death, and to offer a brief history of the manner in which their bodies were brought to Philadelphia.

Chang and Eng Bunker were born in Siam, in the year 1811, but lived for many years in North Carolina, where they were married, and raised large families of children, Chang being the father of ten, Eng of nine. Dr. Joseph Hollingsworth, to whom we are indebted for the information given in this article as to their habits of life and the circumstances of their death, states that he has known them as residents in the neighborhood of Mount Airy, North Carolina, for some twenty years, during which time he has acted as their family physician. Chang, who is said to have derived his name from the Siamese word for "left," was the left of the pair, and was much smaller and more feeble than his brother Eng, whose name signifies "right." Their habits were very active; during the latter part of their life they and their families lived in two houses, about a mile and a half apart, and it was an inflexible rule that they should pass three days alternately at each house. So determinedly was this alternation maintained that sickness and death in one family had no effect upon the movements of the father, and a dying or dead child was on one occasion left in obedience to it; indeed, Dr. Hollingsworth is very positively of the opinion that the death of the twins themselves was of this rule, or, at least, was materially hastened thereby. This will be made apparent hereafter.

The evidences during life that the twins were physiologically distinct entities were very numerous and apparent. They were

different in form, tastes, and disposition; all their physical functions were performed separately and unconnectedly. What Chang liked to eat, Eng detested. Eng was very good natured, Chang cross and irritable. The sickness of one had no effect upon the other, so that while one would be suffering from fever the pulse of the other would beat at its natural rate. The twins not rarely suffered from bilious attacks, but one never suffered at the same time as the other; a circumstance which seems somewhat singular in view of the close connection which the post-mortem has shown to exist between the lives of the pair. Chang drank pretty heavily—at times getting drunk; but Eng never felt any influence from the debauch of his brother—a seemingly conclusive proof that there was no free interchange in their circulation.

The twins often quarreled; and, of course, under the circumstances, their quarrels were bitter. They sometimes came to blows, and on one occasion came under the jurisdiction of the courts. After one of these difficulties Chang and Eng applied to Dr. Hollingsworth to separate them, stating that they could not live longer together. Eng affirmed that Chang was so bad that he could live no longer with him; and Chang stated that he was satisfied to be separated, only asking that he be given an equal chance with his brother, and that the band be cut exactly in the middle. But as Dr. Hollingsworth advised very decidedly against this, and declined to interfere, cooler counsels prevailed.

In August, 1870, Chang suffered from a paralytic stroke, from which he never fully recovered; and during the last year of his life he several times said to Dr. Hollingsworth, "*We* can't live long."

On the Thursday evening preceding their death, the time having arrived for their departure from the house at which they were staying, the twins rode a mile and a half in an open wagon. The weather was very cold—the night being the severest of the winter. Chang had been complaining for some days of cough, with distress and actual pain in the chest. He

was so unwell that his wife thought he would be unable to bear the trip; but he finally went. On Friday morning Chang reported that he felt better, but that in the night he had had such severe pains in the chest, and so much distress, that he thought he should have died.

The twins slept in a room by themselves or with only a very young child present; and some time in the course of Friday night they got up and sat by the fire. As they were accustomed to do this frequently, nothing was thought of it by those of the family who saw them, even though they heard Eng saying he was sleepy and wanted to retire, and Chang insisting on remaining up, stating that his breathing was so bad that it would kill him to lie down. Finally, however, the couple went to bed again, and after an hour or so the family heard some one call. No one went to the twins for some little time, and, when they did go, Chang was dead, and Eng was awake. He told his wife he was very "bad off," and could not live. He complained of agonizing pain and distress, especially in his limbs. His surface was covered with a cold sweat. At his request his wife and children rubbed his legs and arms, and pulled and stretched them forcibly. This was steadily continued until he went into a stupor, which took place about an hour after the family were alarmed. The stupor continued up to death: according to the statements of the family, there were no convulsions.

Dr. Hollingsworth did not reach the house until after the death of both of the twins. He found the wives, and especially the children, averse to any post-mortem being made, but, after much persuasion, obtained permission to put the bodies in a position to be preserved until he could obtain some one from Philadelphia (!!!) to perform the autopsy. He placed the bodies, after they had been thoroughly cooled, in a coffin, which was put in a wooden box, which was, in its turn, enclosed in tin; the whole being buried in a dry cellar in such a way as to be imbedded in charcoal.

As bearing upon the question, what was the cause of the

death of Chang? it is important to state that Dr. Hollingsworth had repeatedly told Chang and Eng that, in his opinion, the death of one did not necessarily compromise the life of the other; that he could separate them, by cutting close to the body of the dead one, without killing the living one. It would appear possible, in view of this, that the death of Eng was not simply the result of fright.

Shortly after the death of the Siamese Twins, Dr. William Pancoast requested the Mayor of Philadelphia to telegraph to the Mayer of Greensboro', North Carolina, in regard to the possibility of a post-mortem examination being obtained. To this the Mayor of Greensboro' substantially replied that he had neither knowledge nor power in the matter. When Dr. Hollingsworth, *en route* North, arrived at Greensboro', the telegram of Dr. Pancoast was handed to him. On the evening of his arrival at Philadelphia (Friday) he saw Dr. Pancoast and Professor Gross, and a letter was written to the wives of the twins, proposing that Dr. Pancoast should come on and embalm and examine the bodies.

On Sunday Dr. Hollingsworth saw Professor John Neill, and, on consultation, it was concluded that the matter was of public importance, and should not be confined to any single private individual. As the promptest method, it was deemed best to call a meeting of such physicians as were interested in the matter and could be hastily gotten together.

The meeting took place on the evening of Monday, January 26, 1874, at the house of Dr. Neill; but, although a number had been asked, only Prof. Leidy and Dr. Ruschenberger, besides Drs. Hollingsworth and Neill, were present at the conference. As the result of their deliberations, it was determined that two gentlemen should be at once dispatched to the homes of the twins, in order to examine and embalm the bodies as speedily as possible; and it was agreed that Drs. William H. Pancoast and Harrison Allen should be requested to go.

It will be seen at once that the College of Physicians was in

no wise responsible for the acts of the Commission, although its name was freely used by the prominent Fellows engaged in the transaction. Indeed, these gentlemen, recognizing this, were prepared to meet the expenses of the trip had the College failed to endorse their action.

Owing to various obstacles and embarrassments, the Commission did not leave the city until Thursday night, January 29. At the request of Dr. Pancoast, Dr. Andrews went with the party as companion and aid.

The Commission arrived at Mt. Airy on the evening of Saturday, January 31, and proceeded to the residence of Eng the following morning, in company with a photographer and Dr. William Hollingsworth, who is the family physician in the absence of Dr. Joseph Hollingsworth. The widows of the twins received the Commission hospitably, and a conference was at once entered into, at which the "Mistresses" Bunker, the Commission, Dr. H., and the widows' legal adviser were present. It was then agreed that, under consideration of embalming the bodies of the twins, permission would be granted to exhume and examine the structures distinguishing them, provided that no incisions should be made which would impair the external surface of the band. Subsequently it was agreed that limited incisions would be allowed on the posterior surface of the band. An agreement in writing was then drawn up, expressing the above restriction, but extending authority to the Commission to remove the bodies to Philadelphia, provided that they be kept there in a fire-proof building, and held subject to the commands of the families when informed of the completion of the embalming process.

The object of the visit of the Commission, having been noised about the country, had attracted a crowd of curious people, who were willing enough to give the necessary aid in exhuming the bodies. The circumstances attending this were briefly as follows: The bodies were buried in the cellar of Eng's house, in a shallow grave, which had been covered with a tumulus of powdered charcoal. This being removed, revealed several

planks covering an outer wooden box, which in turn enclosed a tin encasement of the coffin; after unsoldering the tin box, the coffin was carried to the second floor of the house, to a large chamber. The lid was unscrewed, and the object of the search of the Commission was exposed to view. It was certainly an anxious moment. Fifteen days had elapsed since death, and no preservative had been employed, it was an agreeable surprise, therefore, that no odor of decomposition escaped into the room, and that the features gave no evidence of impending decay. On the contrary, the face of Eng was that of one sleeping; and the only unfavorable appearance in Chang was a slight lividity of the lips and a purplish discoloration about the ears. The widows at this point entered the room, and, amid the respectful silence of all present, took a last look at the remains.

The room was then cleared of all not connected with the work of the Commission; the bodies were disrobed, and preparations at once begun to secure photographs. The bodies were held in an erect position, and negatives of the entire figures, and views of the band at short foci, were secured. The day being cloudy, much time was necessarily expended in obtaining these pictures—time sufficient for a number of observations upon the external appearance of the bodies to be recorded. The notes are given just as they were taken at the time:

Examination Made Sunday, February 1, 1874, *Fifteen Days and Eight Hours after the Death of Chang.*—The bodies were found in the coffin in a good state of preservation; there was a slight cadaveric odor about Chang, with marked passive congestion of the back of the arms and neck on both sides, and in a less degree of the posterior aspect of the forearms, buttocks, thighs, and legs; there was none on the feet, where, however, there was marked fullness of the superficial veins; this was better marked on the left side. There was a greenish discoloration on the anterior abdominal wall.

Face.—Lips moist and discolored; peculiar reddish congestion sparsely distributed over malar prominence and beneath

the ear. The thoracic discoloration was much deeper on the side next to Eng.

The left nipple was visible in front well towards the middle line, the right one just showing. The fingers of the right hand—the paralyzed side—were forcibly flexed, although *rigor mortis* was absent.

In Eng there was passive congestion of back, most marked on the buttocks and infra-spinous spaces—none on the front of the body; slight greenish discoloration of anterior abdominal wall.

In both subjects the hair of the head was gray.

On *the pubis* of each subject the hair of the *left side* was *gray*, that of the *right side*, *black*.

The process of embalming was now begun. Incisions were made to the outer side of the median line of the abdomen in each individual, extending from the inferior margin of the thorax to a point midway between the symphysis pubis and the anterior superior spinous process of the ilium. The aorta was reached after the usual method, but was found to be in an atheromatous condition, compelling the selection of the left primitive iliac for the insertion of the pipe. A solution of chloride of zinc was then injected.

After the embalmment had been completed, the incision was continued upward and inward towards the band. Examination of the band through this incision convinced the Commission of the complex nature of the band, and suggested the suspension of a complete study of the parts until removal of the bodies to Philadelphia. The fact that the photograph had been far from satisfactory, strengthened the Commission in its decision to stop the investigation at this stage. The incisions were, therefore, sewn up, the clothing reädjusted, and the bodies placed in the coffin and coveyed to Mt. Airy. Here the tin box which was used for the temporary burial was again brought into use, and the lid carefully resoldered. Without delay the Commission started on its return, expressing the bodies at Salem.

The Commission arrived in Philadelphia February 5, having been absent one week.

Upon the arrival of the bodies at the College of Physicians, they were placed in the care of the committee upon the Mütter Museum and of the Hall Committee, and were closely locked and guarded until a special meeting of the College was called, upon Monday evening February 8, when, after considerable discussion, it was agreed that the College should accept the action of its Fellows and pay the expenses of the trip. Further, a vote of thanks was given to the gentlemen who went to North Carolina, and to Dr. Hollingsworth, and the Mütter Committee was authorized to appropriate three hundred and fifty dollars for the preparation of casts and photographs, which should remain the property of the Museum. Finally, the College appointed the Mütter Museum Committee and the original Commission (Drs. Pancoast and Allen) as a joint committee for carrying out the examination of the Siamese Twins; it being understood that a report and a demonstration of the specimens were to be made to a subsequent meeting of the College; also, that the dissections and the report were to be the work of the original Commission.

On Tuesday, the 10th instant, they were exposed for study; they were at that time found in a satisfactory condition, except the right lower extremity of Chang, which required immediate care to prevent further destructive changes taking place.—*Philadelphia Med. Times.*

NOTE.—The results of the dissection will be given.—E. S. G.

The Six Follies of Science.—The six follies of science are said to be the following: The quadrature of the circle; the establishment of perpetual motion; the philospher's stone; the transmutation of metals; divination, or the discovery of secrets by magic; and, lastly, judicial astrology. It is unwise to say that anything is impossible, until the impossibility is demonstrated. It is not at all improbable that the present century may see that one of these so-called follies is a reality.—*Journal of Applied Sciences.*

Prostitution in Japan.—Japan has many "soiled doves;" and, among the many social reforms of last year, it has freed them from the obligation of their contracts, to which in many cases, according to the last consular report, they "had never been willing parties." The uncaging, however, has been effected without due regard to consequences, and their escape from the brothel-keepers and subsequent flight through the settlements has converted them into "carrier-pigeons" of a very dangerous breed, distributing disease right and left among natives and foreigners. Thanks to Staff-Surgeon Hill, R. N., in charge of the Lock Hospital at Kanagawa, whose post would have declined into a sinecure from the hasty action of the authorities, street-prostitution has been suppressed, and the majority of the women gradually disbanded and sent to their homes, either in the neighborhood of Yokohama or at a distance from it. Under the new system, each woman pays a license-fee of three dollars a month to the local government; but Dr. Hill views with regret the action of the authorities in compelling the women to pay their own Lock Hospital expenses. The consul at Kanagawa is in hopes that a portion at least of the revenue thus derived, which is likely to amount to some $30,000 $40,000 per annum, may be applied to the relief of this unfortunate class.—*Canadian Med. Times.*

Albinism and the Marriage of Cousins.—G. Arcoleo ("Centralblatt," No. 28) has made some remarkable observations on the occurrence of albinism in certain towns of Sicily. In a population of 255,000, living in five towns, were 62 albinoes, or 1 in 4,009; 24 of these were not living at the time of making the observations. Of the whole number, 24 were males, 28 females. They were members of twenty-four families, but in only three of these were all the children albinoes. In one case a pair of twins was observed, one normal, the other an albino. Six of these persons were married, and all but one had children, none of whom showed the least albinotic taint; nor was there any history of this defect in the parents or remoter

ancestors. In several cases, it was noticed that, while the one parent of an albino was blonde, the other might be dark. While, therefore, inheritance had plainly nothing to to do with this peculiar condition, the writer thought he found strong support for the theory which connects albinism with consanguineous marriages. Other supposed causes, such as climate, privations, etc., were plainly without influence. On the other hand, in five of the twenty-four familes, the parents were related in the second degree (? cousins); and some other consanguineous marriages had been contracted in previous generations. Although, in the other cases, no such relationship could be traced, the social and political conditions of Sicily were thought to make it probable that such relationships might exist, though unexpected by those concerned. The insular position, the want of intercommunication between different parts of the island itself, the jealousy and repugnance shown by the Sicilians themselves toward foreigners, are all conditions which must cause considerable intercrossing of the same elements. For instance, one of the families containing albinoes was that of a fisherman in Palermo, one of a race of people who are confined to one quarter of the town, and notoriously marry only among themselves. Moreover, other diseases, supposed to be connected with consanguineous marriages, are as a matter of fact, particularly common in Sicily; e. g., deaf-mutism, rickets, idiocy, epilepsy. In support of the theory, it is also urged that albinism very frequently occurs in the natives of the African coast, where there must be the same isolated condition of the population as on an island.—*Med. and Surg. Reporter.*

Plugging the Rectum.—William Allingham, F. R. C. S., Surgeon of St. Mark's Hospital for Fistula, London, (in his work on Fistula, Hæmorrhoids, etc.,) recommends the following procedure, if secondary bleeding occurs after an operation for piles. When called to a case of hæmorrhage, always arm yourself with a full-sized, bell-shaped sponge, and plenty of cotton wadding. Take also some persulphate of iron or powdered alum.

Thread a strong silk ligature through near the apex of your cone-shaped sponge, and bring it back again, so that the apex of the sponge is held in a loop of the thread. Then wet the sponge, squeeze it dry, and powder it well, filling up the lacunæ with the iron or alum. Pass the forefinger of the left hand into the bowel, and upon that as guide, push up the sponge, apex first, by means of a metal rod, bougie, penholder, or a rounded piece of wood, if nothing better can be had. The sponge should be carried up the bowel at least five inches, the double thread hanging outside the anus. When this is so placed, fill up the whole of the rectum below the sponge thoroughly and carefully with cotton wool well powdered with the alum or iron. When the bowel is completely stuffed, take hold of the silk ligature attached to the sponge, while with one hand you pull *down* the sponge, with the other hand push *up* the wool. The joint action will spread out the sponge, like opening an umbrella, and bring the wool compactly together. This plug should remain in at least a week, and it may be retained a fortnight or more. —*Medical Record.*

Roll of Honor.—The following is the list of prizes awarded at the commencement exercises of the Louisville Medical College:

Gold Medal for General Proficiency; given by the College—Awarded to W. M. Holt, M. D., Kentucky. Favorable mention of O. M. Humeston, M. D., of Kentucky.

Silver Medal for best Thesis; given by the College—Awarded to E. T. Easley, M. D., Mississippi. Favorable mention of A. S. Holmes, Mississippi; L. P. Randall, Texas; J. Q. Thomas, Kentucky. This decision was made by the committee consisting of Drs. R. C. Hewett, David Cummins, and J. J. Speed, who kindly and efficiently discharged this responsible labor.

Silver Medal for best Anatomical Specimen; given by the College—Awarded to W. S. Holliday, M. D., Illinois.

A Case of Surgical Instruments—For best class standing in

anatomy; given by Mr. Simon N. Jones, druggist to J. M. Inge, M. D., Texas.

A Case of Surgical Instruments—For the best class standing in surgical anatomy; given by Prof. C. W. Kelly to O. M. Humeston, M. D., Kentucky.

Amputating Case of Instruments—For best standing in surgery; given by Prof. J. M. Keller to A. S. Holmes, M. D., Mississippi, and a duplicate to Dr. E. T. Easley, Mississippi.

The prize for best class standing in Materia Medica and Therapeutics, given by Prof. John A. Octerlony, was given to W. T. Chandler, M. D., of Kentucky. Favorable mention being made of R. S. Seely, M. D., of Kentucky, and A. G. Osterman, M. D., of Kentucky.

Silver Medal—For best class standing in Principles and Practice of Medicine. Given by Prof. E. S. Gaillard to W. T. Chandler, M. D., Kentucky. Favorable mention of J. Q. Thomas, M. D., of Kentucky. This award was made by Drs. S. Brandeis, T. P. Satterwhite and W. Forrester, who courteously and carefully acted as judges during the test orally made.

Pocket-case—For best report of lectures on clinical surgery delivered by Prof. J. M. Holloway; awarded by him to W. S. Holliday, M. D., Illinois.

MEDICAL NEWS.

'Nulla dies sine linea."

A Great Man Gone.

At a called meeting of the physicians of Louisville (held at the "School Building," corner of Centre and Walnut streets) Dr. R. C. Hewett was called to the chair.

On motion of Dr. J. J. Speed, the following committee were appointed to report proper resolutions in regard to the death of Prof. Henry Miller: Drs. E. S. Gaillard, D. Cummins, E. D. Foree, B. M. Wible, John Crowe R. C. Holland, U. E. Ewing, Lewis Rogers, H. Bullitt, Samuel Brandeis, J. J. Speed.

After a brief absence, the committee reported the following resolutions, which were unanimously adopted:

When in the Providence of God, distinguished men are removed by death from the scenes of their earthly labors, it is the privilege of their associates

and the duty of their friends to offer public testimony in their honor, and to pay just tribute to their memory.

Prof. Henry Miller, of this city, having after a few brief months of illness been relieved of his suffering by death, we, the physicians of Louisville, on this sad occasion do unanimously resolve.

1. That we have heard of the death our distinguished brother with sincere sorrow.

2. That it is our pleasure to testify to his spotless character as a citizen; his great and deserved reputation as a practitioner; his uniformly honorable career as a teacher; his eminent success as an author; his unblemished record in his relations with his brethren; to the entire confidence inspired by him in the sick entrusted to his care; to the valuable service rendered by him to the many medical societies which he fostered and instructed; to his admirable observance of all professional rules and requirements, as the result of which he signally secured dignity and respect for a profession which he so eminently adorned.

3. That we tender to his family our sincere sympathy; that a copy of these resolutions be sent to them; to the daily Press of this city; to the medical journals of this State, and to all of the medical associations, domestic and foreign, of which he was either a regular or an honorary member.

4. That we will attend his funeral in a body, and unite with his very many bereaved friends in performing the last sad obsequies in behalf of one whose memory his City, his State, his Country, and his Profession will ever cherish with pride and admiration.

J. A. Larrabee, M. D., Secretary.

THE FACULTY OF THE LOUISVILLE MEDICAL COLLEGE.

At a meeting of this Faculty, on the 9th instant, the following preamble and resolutions were unanimously adopted:

Whereas, It has pleased Almighty God to remove from the field of his earthly labors, our distinguished friend and colleague, the late Professor Henry Miller; and,

Whereas, It is the duty of all men to take proper public as well as private action in honor of their distinguished dead:

Resolved, That we, the undersigned members of the Louisville Medical College Faculty, have heard with pain of the death of our distinguished associate, who, for so many years, has labored with us in the founding of this Institution, of whose Faculty, during this entire period, he has been the honored President.

Resolved, That we bear cheerful testimony to the eminent worth of the deceased in all of the varied relations of his past life, as a citizen of unblemished character, as a physician of deserved and thoroughly recognized distinction, as a teacher of uniform fidelity and efficiency, and as an author of well-earned and wide-spread reputation.

Resolved, That we attend the funeral obsequies in a body, accepting the invitation of his family to act as pall-bearers on this sad occasion.

Resolved, That the President of the Board of Trustees be invited to deliver, in memory of our late President of the Faculty, a memorial address on the evening of the approaching Commencement Exercises of this College.

Resolved, That we tender our sincere sympathy to the family of the deceased; that a copy of these resolutions be sent to them; that they be recorded in the minutes of this Institution, and that they be sent for publication to the daily press of this city, and to the medical journals of the State.

Henry M. Bullitt, M. D., Professor of the Institutes of Medicine and Hygiene.
E. S Gaillard, M. D., Professor of the Principles and Practice of Medicine.
John A. Octerlony, M. D., Professor of Materia Medica, Therapeutics, and Clinical Medicines.
John Goodman, M. D., Professor of Obstetrics.
J. A. Ireland, M. D., Professor of Diseases of Women and Children.
J. M. Keller, M. D., Professor of Principles and Practice of Surgery.
J. W. Maxwell, M. D., Professor of Chemistry.
C. W. Kelly, M. D., Professor of Anatomy.
J. M. Holloway. M. D., Professor of Clinical Surgery and Physiology.

E. S. GAILLARD, M. D., Dean.

THE CLASS OF THE LOUISVILLE MEDICAL COLLEGE.

The following resolutions were adopted by the class of the Louisville Medical College in reference to the death of Professor Henry Miller:

Whereas, It has pleased the Great Physician, in His infinite wisdom, to remove from his useful labors among us our venerable and beloved teacher, Professor Henry Miller, who has so long and so ably filled the chair assigned him in our College; and whereas, the Alumni of this College, and all others with whom he has ever been connected, will learn with deep regret of the death of this distinguished teacher and physician; therefore, be it

Resolved, That in his death the College has lost one of its brightest ornaments, the Profession a sincere and devoted medical philosopher, and the world a great and good man.

Resolved, That we, the students of the Louisville Medical College, appreciating as we do our great loss, unite with the Faculty in their feelings of sincere regret.

Resolved, That we tender to the family of Professor Miller our heartfelt sympathy, believing their and our loss has been his gain.

Resolved, That a copy of these resolutions be sent to the family, and also to the daily press for publication.

T. W. TARLETON,
LUTHER B. CREATH,
W. T. CHANDLER,
H. R. DUPUY,
R. S. SEELY, Chairman,
WM. L. HUDSON, Secretary,
Committee.

THE FACULTY OF THE UNIVERSITY OF LOUISVILLE.

At a meeting of the Faculty of the Medical Department of the University of Louisville, held upon the evening of February 9th, the following action was taken in regard to the death of Professor Henry Miller:

Whereas, We have heard of the death of Professor Henry Miller, who was among the founders of the Medical Department of the University of Louisville; and who, for more than thirty years (from 1837 to 1868), filled the chair of obstetrics in this Institution; whose name is affixed to hundreds of the diplomas under which the graduates are practicing; whose earnest labors in the cause of medical instruction; whose researches in medical science, and admirable treatises won him a place in the foremost rank of

medical teachers, practitioners, and writers of his time, and especially made his fame as an obstetrician world wide; therefore,

Resolved, That, in the death of Professor Miller, not only the Profession of this city, but that of the whole country, has met with an inestimable loss.

Resolved, That we tender to his family our sympathies in their bereavement.

Resolved, That we attend his funeral in a body with the medical class.

Resolved, That these resolutions be spread upon our minutes, and be published in the daily papers.

JOHN E. CROWE,
LUNSFORD P. YANDELL, JR.,
R. O. COWLING,
Committee.

RESOLUTIONS OF RESPECT ADOPTED BY THE PHYSICIANS OF LOUISVILLE AND THE MEDICAL STAFF OF THE CITY HOSPITAL.

Upon Tuesday morning, Feb. 17th, the physicians of Louisville assembled in the office of Dr. J. M. Keller for the purpose of taking some action expressive of the great and general regret experienced at the loss to society and to the ranks of the Profession of so eminent and respected a colleague as Dr. Richard H. Rudd.

Upon motion, Dr. R. C. Brandeis was called to the chair and Dr. C. S. Fenner chosen Secretary. A committee of five were appointed to draft appropriate resolutions. After a short consultation the following were reported, and at once adopted:

Whereas, It has pleased an all-wise Providence to remove from his earthly labors our beloved brother in the profession, Dr. Richard H. Rudd; and

Whereas, We recognize that in his death the Profession and Society have sustained a serious loss; therefore be it

Resolved, That we hereby give expression to our feelings of profound sorrow at the news of Dr. Rudd's death in a foreign country, and tender to the bereaved family and large circle of friends our sincere condolence.

Resolved, That a copy of these resolutions be furnished the family of the deceased, the Medical Press of the State, and the daily papers of the city.

E. FOREE,
E. S. GAILLARD,
H. D. RUSCHHAUPT,
J. A. OCTERLONY,
D. S. REYNOLDS,
} Committee.

A meeting of the Medical and Surgical Staff of the Louisville City Hospital was held at the hospital February 17th, and resolutions of respect to the memory of their former associate Dr. Rudd, were adopted. Dr. Holloway was called to the chair, and Dr. Wilson chosen Secretary. The following are the resolutions adopted:

Whereas, the sad intelligence has reached us of the death of Dr. Richard Rudd, which occurred in Paris on the 15th of February; and

Whereas, Dr. Rudd, during the past twenty-five years, has been at different times connected with this Hospital in the several capacities of student, resident graduate, visiting physician and surgeon, and being at the time of his death one of the oculists of the Institution and President of the Hospital Staff; and

Whereas, His professional attainments commanded our respect for him as a physician, while his kind heart, his refined nature, his truthful character and virtues won our love for him as a man; therefore be it

Resolved, That in the death of Dr. Rudd the Profession has lost a skillful physician, the Hospital Staff a useful member, and society a most amiable gentleman. That we tender to his family our sympathies in their bereavement.

Resolved, That a copy of these resolutions be sent to his family, and that they be published in the daily papers of the city and the medical journals of the State.

DR. J. M. KELLER,
DR. L. P. YANDELL, JR., } Committee.
DR. R. O. COWLING,

EXTRACT FROM A BIBLIOGRAPHICAL SKETCH OF M. LABORDE, M. D., of Columbia, S. C. By A. B. PATTERSON, M. D., Barnwell, S. C.

On the 9th of November, 1873, the earthly remains of this eminent member of the Medical Profession were consigned to their last resting-place, at his late home, in the city of Columbia, S. C.

He was born in the county of Edgefield, S. C. Nurtured by his pious parents, he early embraced the blessed truths of the Christian faith. To the day of his death he remained a communicant of the Episcopal Church. He was a member of the first class that was formed in the Medical College of South Carolina, where he received his diploma. He then returned to the village of Edgefield, where for a time he pursued the practice of his profession.

For over thirty-five years preceding his death, he was connected with the South Carolina Medical College, as Trustee and Professor. The old College Faculty, all came to that Institution long after he had entered upon his duties as Professor. They looked up to him as a father. No business, however simple, was ever transacted by the Faculty without first consulting this faithful Professor and Christian gentleman. When the Medical Department was added to the University in 1865, he was chosen Professor of Physiology and Hygiene. At different times he filled the chairs of Logic and Metaphysics, of English Language, Rhetoric, and English Literature. No person could be found better qualified for these positions.

Of his literary productions, the "History of the South Carolina College," his "Physiology," and "A Tribute to Hon. J. B. O'Neal, LL. D.," may be mentioned as works of rare literary excellence.

During the month of October last the Trustees of the University elected the aged Professor President of the Faculty, but on account of political changes he did not accept the position.

His sublime faith in a merciful Providence sustained him through every hour of trial and calamity. During his last illness his Christian fortitude shone with its greatest brilliancy. As his end drew near, he lay in perfect peace and calmness. When the hand of Death descended upon him, he fell asleep like a weary child.

Obituary Notice.—Extract from "A Tribute to the Lamented Dr. N. B. Suddarth, of Franklin, Ky., who died of Cholera July 1st, 1873, in the 52d year of his Life": "When the epidemic made its appearance, Dr. Suddarth was thoroughly prepared for its approach, and entered with a willing heart into the task of healing. He had no thought of personal safety, and scorned the recreant who would neglect his duty when danger

threatened. Cheerfully did he spend the day and night with the sick. Enthused with success, his regular meals were forgotten, and sleep was caught by chance, until the last night in June, when a storm-cloud swept by that cooled the air and revived the hope that the electric fires had done their work of purification. In soft moonlight, after three o'clock, he sought his home for the last time. The hours passed on until pain and alarm, peculiar to the prevailing disease, overcame his physical frame; a deathly pallor settled fast on brow and cheek. The suffering ceased, but the pallor grew, until exhausted nature yielded to Death, the greedy victor. There is a sublimity in his heroic death. In silence, with the gathering night for a funeral pall, the holy stars and peerless moon to light the way, with the sighing winds chanting a sad requiem, he was borne from our gaze and gently lowered to his earthen couch, embalmed in the heart of every friend and lamented by all who knew his worth."

Dr. F. C. Webb, editor of the "London Times and Gazette," died December 24th, aged 48 years.———A Society of Neurology and Electrology has been organized in New York.——— A new edition of the "English Parmacopœia" is about to be issued.———The Edinburgh Infirmary refuses to admit female and male students at the same time into its operating room. ———Thirty Russian female students have just been expelled from the University of Zurich.———The Royal Botanic Society of London is endeavoring to naturalize the Eucalyptus Globulus.————During the recent London fog, nearly two hundred persons perished from cardiac and respiratory diseases. ———A hospital for diseases of the throat has just been established in New York.———Michigan courts have refused to issue an order compelling the appointment of two professors of homœopathy in the University of Michigan.———Dr. S. H. Carney is busily and successfully engaged in preparing medical charts of the United States.————The "Vermont Medical Journal," issued at Burlington, by J. M. Currier, M. D., has just made its appearance. It is a bi-monthly; $3 a year. The

first number presents an excellent appearance.———Absolute alcohol, reduced to a temperature of 20° F., seems to be a perfect local anæsthetic.———Dr. Livingston seems to be really dead; but no one will be surprised to hear that he is yet alive. ———It has been discovered that ladies look better in muslin than in print. Pass this item around.———Ether has been used in the Boston, Mass., General Hospital in 15,000 cases.——— *A Good Opening.*—The position of medical adviser to the tribe of Tulare Indians, California, is now vacant. The late incumbent was killed for losing a patient. Only a limited number of applications will be entertained.———The "Chicago Journal of Nervous and Mental Diseases," edited by Drs. L. S. Jewell and H. N. Bannister, has been issued. It makes a handsome appearance and deserves a liberal support.———The last piece of rascality is the adulteration of butter with mashed potatoes. Invert the proportions and rascality is transformed into a wholesome diet.———*New Treatment for Collapse from Hæmorrhage.*—Hypodermic use of ether continued until the ether is detected in the breath.———*Fact Worth Knowing.*—Gum camphor and hydrate of chloral, when mixed together, are converted in a few days into a colorless liquid.———*Honor to Professor Rokitansky.*—The Municipal Council of Vienna have honored themselves by giving the freedom of the city to this venerable and distinguished medical hero.——— Fashionable practice for unmarried physicians—to burn candles impregnated with styrax in their offices and chambers. The aroma from such combustion diffuses itself throughout their clothing, and they are invited to parties for the purpose of economizing pecuniary outlay for perfumes on the part of the female guests. It is feared that as the result of this publication there will be few bachelor physicians in America.———It seems that the Chicago fire produced 350 cases of insanity.——— The United States Senate has authorized the Secretary of War to detail medical officers, for the purpose of investigating the causes of epidemic cholera.———Large Northern cities are wisely taking vigorous action for enforcing free ventilation in

public school buildings.———Drs. Pancoast and Allen have decided that the Siamese Twins belong to that species of monstrosity called by a name, notoriously familiar in domestic and professional circles, "Omphelopagus Xiphodidymus." This species of deformity has become a favorite topic of conversation in polite circles.———The last beneficial treatment of hydrophobia—inhalation of pure oxygen gas.———Professional anxiety at last relieved. The Prussian Queen Dowager has unquestionably bequeathed her country house to Dr. Grimm.——— *Proof of Progress in Morality—A News Item of the Past.*—"At a ball at court a child was dropped by one of the ladies, but nobody knew who, it being taken up by somebody in her handkercheif. The next morning all the ladies of honor appeared early at court for their vindication, so that nobody could tell whose this mischance should be. But it seems Mrs. Wells fell sick that afternoon."—*Pepy's Diary.*———The hydrate of chloral, which in 1869 cost eighty dollars a pound, so that each sleep produced by it could be reckoned at one dollar, is now advertised on the list of a German chemical factory at about two dollars a pound.———Prof. William Proctor, Jr., died February 10th, of heart disease, at the age of fifty-seven. On the preceding evening he had lectured at the College, and retired near midnight apparently in his usual health; about half an hour later he had breathed his last. Attended by numerous friends, by the students and members of the College, and by delegations from the Maryland College, the New York College, and the New Jersey Pharmaceutical Association, his mortal remains were conveyed to Mount Holly, N. J. For a period of thirty-seven years his labors have aimed at raising the status of pharmacy, and have been of such importance and lasting value that the deceased may justly be regarded as the father of American pharmacy.—*Ex.*———It has at last been discovered when beef tea was first used in England; when Henry VIII. dissolved the Pope's Bull.—*Bandaging in Acute Rheumatism.*—Dr. Oehme, in the "Archiv für Heilkunde," recommends immovable bandages in acute rheumatism, thus securing

perfect rest. He relates his experience of this means of treatment in forty five cases. After comparison with various means of treatment employed in forty-five other similar cases, Dr. Oehme stated the following results in favor of the bandage system: First, the pain is considerably lessened; second, the duration of the fever is much shortened; third, the duration of the whole attack is considerably abbreviated.—*Med. and Surg. Rep.*———Dr. Wilson Fox has been appointed Physician in Ordinary to their Royal Highness, the Duke and Duchess of Edinburgh, the much-talked-of bridal pair.———*Florida State Medical Society.*—A preliminary meeting was convened at Jacksonville on the 14th of January, for the purpose of organizing a State Medical Society. The meeting was attended by a large number of medical men, and a list of officers was chosen for the ensuing year.—*Exchange.*

EDITORIAL.

"Nullius addictus jurare in verba magistri."—Hor.

Death of Dr. Henry Miller.—The Medical Profession will learn with sincere regret of the death of this great man; memorial notices in regard to whom will be found elsewhere in this Journal. As his "Life," with a perfect likeness of him, was published in the January number of this Journal for 1872, it would be merely a repetition of published and well-known facts to record here these interesting details. The obituary resolutions recently passed and published by the various organized medical Bodies of this city, and by the meeting of its medical staff, are so full, just and complete, that the public are fully in possession of the chief facts of his personal and professional record. As a man, a citizen, a son, a husband, a parent, an associate and friend, Dr. Miller received always the unqualified commendation of all who knew him. As a medical man,

he was an industrious, progressive, energetic student; a clear, independent, logical thinker; a lucid, original, concise and honest writer; a careful, faithful and able teacher; a distinguished and honored author; a celebrated, successful and reliable practitioner; an ethical, courteous, and scrupulously just brother; a firm patron and able supporter of all medical organizations; a welcome and instructive visitor to every medical circle. What more can be said? After a beautiful life; a distinguished record; a happy and honored death, he rests from his labors; and rests in peace.

BREVITIES.

It is feared that the new Registration Law of Kentucky will prove a failure. The work should be under medical and not secular control.———In the last Journal allusion was made to the "late" "American Journal of Obstetrics," as it was impossible to induce the publishers to send the missing numbers of nine months. The allusion was to the delay in its arrival, and not to any termination of its existence. On the contrary, under the management of its excellent and accomplished editor, Dr. B. F. Dawson, of New York, and with the beautiful typographical appearance developed by its new publishers, William Wood & Co., this valuable Journal is increasing in vitality, and deserves abundant support. ——— The many friends of Prof. Otis F. Manson (one of the able physicians of Richmond, Va., and an excellent teacher and vigorous writer) will learn with regret of the death of his esteemed and beloved wife; who died January 17, 1874. Her husband has the sympathy of a large circle of personal and professional friends.———Drs. J. S. Potts, and A. B. Spence have opened a hospital (at Mexico, Mo.,) for the treatment of diseases of women. They ask a fair trial of this Institution, and promise thorough attention to their patients. The location is good, healthy and accessible. It is an unusual experiment outside of large centres, and deserves notice and liberal consideration. ———A similar Institution has been opened at Columbia, Mo., by Dr. V. P. Maupin. There is at this place a fine chalybeate spring, good surroundings, and a

healthy neighborhood. This Press gives all such ethically conducted Institutions full support, and is always ready to sustain them.———Dr. Robert Durrett, of Louisville, Ky., proposes in this Journal that all physicians who hold diplomas bearing the name of Prof. Henry Miller, of this city, should contribute one dollar each to the erection of a monument. A most worthy and commendable suggestion. Who will "head the list?"———Dr. Wallace of Waco, Texas, has been appointed to the medical superintendency of the State Lunatic Asylum. His excellent record, both personal and professional, justifies this most judicious appointment.———*Hymeneal.*—Dr. W. Douglass Morton, Louisville, has been recently united in marriage with Miss J. Lewis Davis, of the same city. This Journal understands that the fortunate bridegroom sustained himself and his profession modestly and creditably. May the future life of the happy pair be unclouded, or if there be a shade, may it be like that which floated in vision before the eyes of the dying and immortal Jackson, when he proposed, after "crossing the river," that in the shade there should be found rest and peace.——The editor of the "Cincinnati Lancet and Observer" is heartily congratulated on the appearance and general management of his Journal.——Rankin's "Abstract" is dead. The reason given is that there are too many similar productions published. It is to be hoped that this will benefit the Compendium originated by Dr. Butler, and so well sustained by his successor, Dr. D. C. Brinton.————It is gratifying to see the "Charleston (South Carolina) Medical Journal" presenting so attractive an appearance, and to find its pages replete with most valuable matter. It is to be hoped that this sterling old work will receive the generous support it so well deserves.———— The Kentucky State Medical Society meets at Shelbyville, April 7th. It is expected that there will be a large meeting. The President, Dr. Joseph W. Thompson, of Paducah, Ky., with his characteristic vigor, is using every effort to secure a large and interesting assemblage. The worthy and efficient Secretary, Dr. J. T. Larrabee (not Labarraque as some will term

him), is heartily coöperating, while the able medical staff of Shelbyville and the country adjacent will certainly, by their well-known hospitality and professional contributions, add largely to the interest, pleasure, and efficiency of the meeting. A large number of papers will be read, and it is expected that this reunion will be most harmonious and profitable.———It is most remarkable that the distinguished gynæcologists of America have not yet taken action for securing the success of that most excellent proposition made by Dr. John D. Jackson, of Danville, Ky.; the proposition of erecting a statue to Dr. Ephraim McDowell, of Kentucky. Will not these gentlemen honor themselves by securing this just tribute to a great man?——— By referring to the News Department, it will be seen that the Louisville Medical College has just closed a most successful session. The class was larger than that of any previous year. The number of graduates is seventy-six; as contrasted with fifty-nine of the year previous. The closing exercises were most attractive. Large numbers were unable to gain admission into the large hall, whose capacity is 1,200. There was a most brilliant audience, with all the charms of beauty, light, and the choicest music. The President of the Board of Trustees delivered an able address, in memory of the late President of the Faculty, the venerable and distinguished Professor Henry Miller. Professor J. A. Octerlony did himself great credit in the valedictory address delivered in behalf of the Faculty. This address was judicious, able and most excellent. The salutatorian, Dr. W. B. Matthews, of Georgia, reflected credit upon himself, his class, and State. He discharged his duty most acceptably. Dr. John McKenzie, of Kentucky, the valedictorian of the class, delivered a beautiful address. It was very much admired, and deserved much admiration.——— The Medical Department of the University of Louisville has also just closed a most prosperous session. Its class was much larger than it has been for many years; over 300; its number of graduates 123. The commencement exercises were very handsome and were much admired. The President of the Board of

Trustees, Mr. Isaac Caldwell, and Dr. L. P. Yandell both made appropriate and very acceptable addresses. The valedictorian of the Faculty, Professor Edward Palmer, delivered an address that was much praised. It was not only excellent and ornate in diction, but replete with sound and excellent advice. The audience was brilliant, and the whole exercises happy and most enjoyable. This city is fast becoming a great medical centre; there were over 600 students present during the past winter. ——— *A Wise Law.*—The Legislature of Kentucky has just enacted a most wise and salutary law, requiring all who attempt to prescribe for the sick to be regular graduates in medicine. This law will compel all who are practicing without a diploma to obtain one. The required degree may be obtained either from a duly chartered Medical College, or from one of the State Boards of Examiners; there being one Board established in each Judicial District. This law will put an end to the pernicious and often dangerous habit on the part of druggists of prescribing for the sick. The law is excellent and was much needed. ——— *Louisville City Hospital.*—The annual competitive examination of this Institution has just been closed, March 9th. The object of this examination is to secure four regular graduates as resident physicians. The Medical Department of the University of Louisville offered nine candidates, and the Louisville Medical College six. The result has been officially declared as follows: The Louisville Medical College won the first three positions, and the University secured the last. The applicants were graded as follows: W. T. Chandler, Kentucky, first; A. S. Holmes, Mississippi, second; R. S. Seeley, Kentucky, third—all being students of the Louisville Medical College. W. Todd, fourth, from the University. N. S. Snyder and E. D. Little, of the Louisville Medical College, stood fifth and sixth on the list, and will secure positions, if there be any resignations. The Louisville Medical College has thus won five out of six positions in a competitive examination before an impartial Board, consisting, in part, of the Faculty of the University. In 1873 the Louisville Medical College

won 3 of 4 of these positions; in 1872 it also won 3 of the 4 positions; and in 1871, it won 2 of the 3 positions offered. This year it wins 5 in 6; the number of its applicants being one-third less than the number presented by the University. One in nine of the University students wins a position in the first six grades; five of the six students in the Louisville Medical College wins a position in the first six grades.———— The unusually large size of the past five Journals has delayed their issue. Subscribers will, it is believed, be patient, as this delay results in gain to themselves. Great effort will be made to issue future numbers more promptly; when there is delay, however, the Journal supporters may feel assured that it is due to the unusual size of the expected number.

NOTICE.

There is nothing more mortifying and painful in the management of any Publication than the receipt of communications, stating in reply to "bills" sent out, that a receipt for the amount claimed is already in possession of the writer. This unavoidable trial and trouble, springing from errors, necessarily occurs in the business of all men, and certainly in the office of every Publication. Some of the subscribers to this Medical Journal (indeed, many of them) appreciate the fact, that an editor, a teacher, the Dean of a large College, a physician, the representative of a correspondence exceeding 6,000 letters annually, and the proprietor of a large work, must be too busy to keep his own Ledgers, though responsible for their accuracy; they appreciate the fact that in his business, as well as in theirs, errors may actually occur, even though strenuous efforts are made to conduct such business justly and accurately; they appreciate the fact, when complaints are to be made in regard to any inaccuracy of accounts, that such complaints can be made with courtesy and generosity, as well as with justice and propriety. There are others, however, who, "thanking God that they are not as other men are," in making errors, etc., never lose the opportunity of being rude, coarse, and offensive, if accounts already paid be by mistake sent to them. An editor has of course to deal with both of these classes; those who are gentlemen always, and those who are gentlemen only occasionally. To both of these classes it is best to say, that the Books of this Journal are kept by gentlemen of unblemished habits and character. Their accounts are very seldom wrong, and when wrong, it gives them pleasure to correct them.

All future errors, it is hoped, will not only be reported, but reported promptly. Subscribers are earnestly asked to do this. Such communications will always meet with prompt and cheerful attention.

THE RICHMOND AND LOUISVILLE

MEDICAL JOURNAL.

VOL. XVII. APRIL, 1874. No. 4.

ORIGINAL COMMUNICATIONS.

"Qui docet discit."

ART. I.—REMARKS ON A CASE OF HODGKIN'S DISEASE. Delivered before the Medical Society of the District of Columbia. By W. H. TRIPLETT, M. D., of Washington, D. C.

Mr. President,—It will be remembered that at a recent meeting of this Society I presented an aged female patient, laboring under extraordinary disease of the lymphatics. So remarkable was this affection, that Dr. Busey offered a resolution, that I be requested to make a special report detailing all the symptoms of the case, with citations from what authorities I could find upon the subject. The Doctor very kindly offered to lend me "Trousseau's Clinical Medicine," that emporium of medical pathology, and thought I would find it, as delineated by the great Frenchman, under the heading, "Adenia."

I accepted the duty imposed upon me, but ventured the assertion, that not to M. Trousseau, but Dr. Hodgkin, an eminent London physician, was due the credit of a first discovery. That he had called attention to this disease as far back as 1832, in

an article published in volume xvii., "Medico-Chirurgical Transactions"; that up to this time the Royal College of Physicians of England had refused it place in the Nosology, and reässerted their determination not to do so, in the adoption of a new nomenclature of diseases; and after reciting 1146 diseases and injuries of the human body, purposely omitted "Hodgkin's Disease."

As an extenuating circumstance, it may be mentioned, that the affection is so very rare, it is more than probable the great majority of that august body had never seen it, or confounded it with other glandular disease, or failed to make special examination when a stray case presented itself. However, there are several distinguished physicians in the English metropolis who have been heard from who make unequivocal announcement of the specific nature of this affection. I allude to Drs. Wilks and Aitken. In his new and elegant treatise on the "Science and Practice of Medicine," the latter physician devotes two pages to its consideration, and expresses regret for having aided, he thinks, in confounding this affection with lardaceous disease.

M. Trousseau, to whom I have already alluded, devotes thirty pages in his fifth volume, "Clinical Medicine," to a minute delineation of the affection, having collected as many as twelve (12) cases in his own practice, and that of other physicians; several being foreign ones.

He most emphatically declares it specific, giving it the name, Adenia; admitting, however, this application open to the objection of being equally applicable to other affections of the glands; but he so names it, in order to make conspicuous announcement of the entity of the disease. It is from the Greek "αδην," ("a gland"). Dr. Bonfils, a pupil, called attention to a case in one of the wards, Hotel Dieu, 1856; but M. Trousseau acknowledges its first recognition to be due to Dr. Hodgkin. M. Nélaton, his celebrated colleague, who like him has also passed away, believed in the specific nature of this disease, and so taught his class.

Virchow, the distinguished microscopist and pathologist of

North Germany, called attention to prodigious hypertrophy of the lymphatics as far back as 1847; but his cases were leucæmic. Two years previously he had announced a new disease—white cell-blood, leucocythæmia; in which he asserted the spleen to be the source of the affection. Two years later he was compelled to modify his opinion, by the discovery of a case of leucocythæmia in connection with lymphatic glandular enlargement, in which the spleen was unaffected; hence he made two classes of leucæmic disease, under the appellations splenæmia and lymphæmia; meaning respectively leucocythæmia of spleenic origin and leucocythæmia of lymphatic origin.

Virchow's famous book on "Tumors" came out in 1865, and under the head of "Lympho-sarcoma," Lecture 21," treats of this malady in a masterly manner. I shall presently make copious extracts from him, and detail a circumstance of exceeding interest in respect to a difference of diagnosis of a clinical case of this disease between himself and M. Trousseau, where the facts, elicited after death, would seem to negative the preconceived opinions of either. Trousseau's interest had received great impetus in 1863, partly, I think, fairly attributable to the above circumstance which had happened in June of that year; partly to the singular fact of three cases falling into his hands in the early part of the year; one of them dying in his hospital, Hotel Dieu, giving great facilities for studying the affection; the particular organs invaded; and the nature of the lesions, by aid of microscopic power. He worked up the subject with consummate ability, publishing his book after Virchow. Drs. Laboulbène and Titon in 1852, Hôpital Sainte Marguerite, took notes of a case designated "General Adenitis," and made microscopic examination of the glands. Wünderlich has carefully studied it in connection with leucocythæmia, believing them phases of one disease, and cancerous. He published his book in 1866, and among other appellations, calls it Hodgkin's Disease.

In the United States nothing has appeared calling attention to this disease so far as I can learn. In the search after the

literature on this subject, I must not omit mentioning a discovery made on the premises of Dr. J. M. Toner, President American Medical Association. The basement of his house represents the vast index of a monster volume of "Medical Literature." Lettered drawers are filled in alphabetical order with strips of paper, on which are marked the heading of all original contributions of the medical journals of this country, and properly numbered for quick reference. The upper rooms represent the body of the book. I had no idea there was such a huge volume, or so great a worker in town.

Under the headings "Glandular Tumors," "Tumors," "Leucocythæmia," I looked through this vast book, but did not exhume Hodgkin's Disease, alias Adenia, alias Lympho-sarcoma. I found something; that is, I found nothing.

There is something of this kind from Boston. Dr. David W. Cheever, in May, 1866, read a paper before the Massachusetts Medical Society, at its annual meeting held in that city "On the Propriety of Amputating Cervical Tumors in Leucocythæmic Patients." He had done so twice. The first was a lymphatic tumor in the cervical region of a little boy nine years of age. Eight months afterwards the tumor returned, but was a little nearer the clavicle. A new glandular mass appeared on the opposite side two years subsequently and in both axillæ.

The next case was in a boy of fifteen years of age, the left side of whose neck, chiefly in the great posterior triangle, was occupied by an irregular, lobulated, oval tumor. The doctor extirpated it. It was glandular, and he thought the case leucæmic, because the blood showed "a large excess of white corpuscles." Ten months afterwards the disease had not returned; he was in good health and had grown much. Now, Dr. Cheever considered this case leucæmia, because the glandular affection in the neck was associated with "an excess of white corpuscles in the blood." May he not have mistaken the *import* of these white corpuscles? There are physiological conditions—digestive, menstrual, childbearing, lymphatic engorgement, all temporary in their duration, that occasion great excess of leuco-

cytes in the blood. But this condition passes away, the blood again becoming normal. In leucocythæmia the blood is highly charged with white corpuscles and the condition is lasting—is permanent. The proportion is one white corpuscle to twenty red corpuscles, and may be as much as one to one. The Doctor don't say he had examined the blood more than once. Leucocythæmia is something deeper—something graver than this case would appear to have been. He mentions three other operations as having been performed in the Massachusetts General Hospital. One recurred in the neck and axilla; one terminated in death by pneumonia in a few weeks. The third died a few days after removal of a glandular tumor of the neck. "At the autopsy, the anterior mediastinum was filled with a similar mass, pressing on the vessels and bronchi, and which it seems probable (to condense) was an enlargement of the thymus gland corresponding to that of the proper lymphatics," I use his language.

This last case looks something like it, but was not Hodgkin's Disease, for it was reported as leucocythæmia. We speak now of enormous lymphatic growths minus the swarm of leucocytes in the blood.

I have seen two cases, both females. The former was forty, the latter sixty-five years of age.

My first patient was Mrs. Clark, wife of Major Soloman G. Clark, C. S. A., residing near Woodstock, county seat of Shenandoah county, Va.

About five years ago this lady applied to me, on account of large painful tumors of the right mamma. I found a cluster of them. They were large, elastic, yielding readily under the pressure of the finger, but quite resilient, with bluish veins coursing over the top, and painful. They were fast, and there was engorgement of the axillary lymphatics.

I thought it carcinoma, and told her so, advising against amputation, as my experience had been unfavorable to that procedure.

Some twelve or fifteen months subsequently I saw her again.

To my great astonishment she now informed me "that the "cancer" had gone away from her breast, and was under her arms, and all over her."

What she said was true. Enormous tumors occupied the axillæ, growing over and around the anterior walls. Her neck was full of small ones. She called my attention to a quite large one half way down the outer aspect of the right arm. A string of almond size, coursed along the sulcus between the biceps and extensor cubiti on this side. I don't remember to have looked at the other arm, though I may have done so. Large tumors occupied the inguinal regions. None of these tumors had suppurated; they were soft, elastic, painless.

At last accounts, something over a year ago, the patient was still living. I fully intended reporting this case when I came across this other patient.

Not to detain you longer, I will proceed at once to a minute description of all the symptoms of the patient lately before this Society, including microscopic examinations of the blood.

Our patient, Mrs. Johannah K., is aged sixty-five years; tall and spare habit; bright eyes and nervo-bilious temperament; native of Bremen, but for over thirty years a resident of this country; the mother of six children, three of whom are living and are robust. A son died three years since with Pott's Disease. The other two died in infancy, but were fat, plump babies. The husband had been an enormous fellow, weighing some three hundred pounds, but died twenty years ago, with some chest affection, emaciated and dropsical, after long lingering illness. This woman had enjoyed excellent health up to the winter of 1868, when she had an attack of pneumonia. She made a speedy convalescence.

Three years since she had an attack of some skin affection in the face, which at the time was called erysipelas; but after careful inquiry, I am led to believe it to have been eczema. She recovered in several weeks, but since that time she suffers with a sore nose in cold weather. At this season of the year there is a constant watery discharge from it; but it is never

purulent, nor sanguinolent. The tip or point is red and tender. When warm weather sets in the trouble ends, to begin again the following autumn.

About fifteen months ago, she noticed small lymphatic tumors in the neck; chiefly under the lower jaw. Soon after this, she noticed one in the right axilla, but it subsequently went away. Last winter she had another attack of pneumonia, which kept her in the house a good while. In the following spring, the spring of 1873, there was an explosion; the diseased glands suddenly showing themselves all over the body; and in the axillary and inguinal regions; they rapidly grew to immense size.

At this writing her condition is as follows: The abdomen is tumid; (I begin with the abdomen, for here the great labor of hæmatosis is chiefly performed, and in this cavity remarkable alterations take place in this, and in a kindred disease, leucocythæmia); it is not only tumid, but tender to the slightest manipulation.

The moment the fingers impinge upon the abdomen wall, the muscular substrata become tense and hard as a drum head; and under the loose integument feeling much like it. You will remember it as a characteristic symptom in peritonitis, but there is absence of the heat and dryness, that accompany the latter affection. If the pressure increases, the patient cries out with pain. It is not possible to make manipulation without the induction of anæsthesia. I preferred not to do this. I was especially anxious to learn if there was hepatic or spleenic enlargement; but came to the conclusion there was not on the following evidence. There is no flaring of either hypochondrium; no protuberance of the softer abdominal parietes contiguous thereto, which always accompanies much hepatic or spleenic enlargement. In addition so this, there was no encroachment on the pulmonary spaces. The right hypochondrium, of course, is dull, but this dullness does not extend farther up than the lower border of the fifth rib; even there resonance is only diminished, gradually fading out as we descend. The respiratory murmur is distinctly heard over the greater part of this region, and quite near the

inferior border. There is no lung pressure in this quarter.

In the left hypochondrium there is conspicuous resonance, and the respiratory murmur is clear and uniform throughout; a little loud perhaps, but not sibilant. I think we may safely say, there is no hypertrophy of the liver or spleen.

It is the middle and lower zones that are pendant—no fluctuation that I can discover, but I will not deny the possibility of very limited ascites. There is unusual dullness on percussion. The cavity appears to be full of solid material, and I believe it to be hypertrophied lymphatic glands. Of course I cannot say the mesenteric are not among the number, but they never acquire the same monster growth as the lymphatics; yet they have grown as large as hen eggs. In the abdomen of a man fifty seven years of age, dead of this disease, M. Trousseau saw lymphatics as large as goose eggs.

I think I can safely say, this woman's abdomen is full of hypertrophied glands. This state of things, one would very naturally infer, ought to be attended by indigestion and serious functional disturbance; but as yet there has been immunity from any of these disorders. There has been no cramp; no constipation; no diarrhœa; no dyspepsia. Her appetite is good, and digestion, to all appearances, is well performed.

This makes me doubt of much mesenteric involvement as yet. The secretions of the primæ viæ, which would include those large abdominal glands, the liver and pancreas, seem, to all appearances, as well performed as if no disease lurked in the neighborhood.

The kidneys were not forgotten. The urine is clear, with acid reäction. Sp. grav. 1025.. A little high, it is true, but not albuminous, nor glycosurous.

I did not make an examination per rectum or per vaginam to learn if the lymphatics along the os sacrum and intra-pelvic regions were also affected; but I have no doubt that they are, as the proximal inguinal regions are full of these tumors.

Passing up to the organs of the chest, I made a most painstaking examination of the lungs. I did this because there was

some dyspnœa, and I wished to find out the source of trouble; the lesion on which it depends. Save slight mucus râles in the locality of the right bronchus, I could find nothing whatever of an abnormal nature. My impression, however, is that the respiratory murmur is a little too loud—a little too puerile. I mention the mucous râle, because it was the only morbid thing I found; and really nothing more than what we might have expected in one so old. Some degree of bronchitis seems almost natural in advancing life, so very common is it. She don't complain of any cough, unless she exercises, and brings on an attack of dyspnœa.

Tumors of the Superfices—Cervical Region.—These are most abundant in the posterior triangle; chiefly congregated about the upper portion, where they swell over the mastoid process and parotid regions; thence along the inferior maxillary to the mesial line.

The submaxillary glands are not larger than almonds. A tumor as large as a walnut occupied the centre of the posterior triangle, reaching nearly to the clavicle.

Several small glands are situate on the posterior aspect of the neck, lying in the sulcus formed by the fibres of the trapezii, near their upper origin. There are several diminutive glands in the apex of the anterior triangle.

There is close correspondence of the opposite sides of the neck.

Axillary Region.—Here the tumors have acquired their greatest size. They are of mammary appearance; made up of conglomerate glands soldered firmly together. They are located about the anterior wall of the axilla, closely embracing the great pectoral muscle, and swelling over into the axilla and toward the mesial line. In the left side they are somewhat larger than in the right. The latter perhaps is as large as an infant's head at term, and nodulated. I counted four protuberances, the middle one being the largest; as large I think as a turkey egg. Small, bluish veins course over them. They are elastic and free from pain.

Inguinal Region.—Here the tumors are quite large, being a little less than the axillary growth. They are elastic and free from pain. They do not obstruct the circulation, as there is no œdema of the limbs or feet.

Extremities.—My impression is, in these localities the lymphatics are never greatly perturbed.

No special mention is made of tumors in these localities. At the autopsy of patients dead of the disease, all the lymphatics were said to have been affected, but special mention was only made of tumors of the trunk, as these were of immense size.

In my first patient when I last saw her, there was a large tumor on the posterior aspect of the arm, and small ones were strung along the brachial artery.

Mrs. K. has a small tumor, but recently come, on the left arm, near the inner condyle. She says there are more on her legs. She mentioned, that "at night she had cramp in them."

The heart sounds are good, and there is no hurried action. The pulse is full, soft, and regular, at about seventy-five beats per minute. There is no evening exacerbation. No sign of hectic, including colliquative sweats. No epistaxis, ecchymosis, or bleeding of the gums. Nothing to show blood dyscrasia. Yet she says she has lost flesh—that she is not as fat as she was a year ago. She also complains of great weakness, but I can discover no blowing sounds in the vessels of the neck, as in the anæmic.

I confess I cannot understand this symptom, for the microscope does not show a deficiency of red corpuscles. Somehow the motor centres are seriously embarrassed; but there is no paralysis. There is no neuralgia. The patient sleeps well. The rational processes are well performed, and in no manner is the mind disturbed. Nor is there anything conspicuous of anæmia—no serosity anywhere—no swelling of the feet of nights; no puffing of the eyelids and face of mornings. On the contrary, there is a healthy glow in the face; I think more than is usual in one of her age and flesh.

She complains of weakness and dyspnœa. This latter symp-

tom Trousseau says is dependent on compression of the trachea and bronchi. Sometimes it is so excessive as to destroy the patient by asphyxia.

In illustration of this extreme degree of tracheo-bronchial compression from enlarged lymphatic glands, I will instance that case of thrilling interest, in the early practice of this Frenchman, to whom the world owes imperishable fame, and a debt of never-ending gratitude.

Somewhere near the year 1846, M. Amussat, an accomplished French surgeon, summoned M. Trousseau to Néothermes to see a young man nearly asphyxiated by immense glandular growths in the neck that compressed the trachea. For nearly a year he had been the subject of general glandular enlargement. The anatomical relations of the parts had all been destroyed, and the introduction of a bistoury into the neck, turgid with swollen vessels was full of peril. The patient was the intimate friend of Amussat, and he positively refused to perform the operation, for fear his hand would be unsteady. As soon as the superficial aponeurosis had been divided, some of the tumors spurted out from the force of compression. With great caution and after extreme difficulty, others were hooked out along the trachea, till as many as seven or eight had been removed. The respiration was at once improved, but he still breathed with difficulty. The trachea was now opened, when an examination low down in the tube revealed great constriction about three inches from the external orifice. A long canula was now introduced, and with great difficulty insinuated through the constricted portion, when respiration at once became easy.

The patient, however, died the next day. It is a subject of surprise, that M. Trousseau, after returning to Paris, did not say something about this case. It was not till ten years subsequently that Dr. Bonfils, a pupil in the wards of the Hotel Dieu, called attention to a similar case in that hospital. He therefore is the first Frenchman whose name is connected with

Hodgkin's Disease. It is more than probable M. Trousseau had seen others.

Microscopic Examination of the Blood.—I have alluded to the use of the microscope. It was absolutely necessary to resort to the use of this instrument to determine whether the patient be leucocythæmic.

The anatomy of the blood organ had to be inspected for leucocytes. Our very courteous and accomplished townsman, Dr. J. J. Woodward, of the National Museum, rendered me valuable assistance. But the blood that I had taken in a cupping-glass had been out of the capillaries some fifteen or twenty minutes, and had coägulated. This condensing of the fibrin forces out the white cells from among the red corpuscles; hence we did not find even the normal amount of these corpuscles. The Doctor showed me a most excellent method of making this microscopic examination. A drop of warm fluid blood is taken from a turgid index finger by the prick of a needle at its extreme point, and placing a piece of very thin glass over it, permitting its own weight only to spread out the blood-drop, place it promptly in the field of the microscope.

Subsequently I repaired to the patient's home with my own microscope, and had better success hunting for leucocytes. I found more of these, and some globulines; but nothing approximating the condition of the blood in leucocythæmia.

In one field I counted as many as fourteen leucocytes; in others there were only two or three. The ratio of leucocytes to red corpuscles must have been one to several hundred—perhaps 300, or even more. Moleschott gives the ratio of normal blood at 1 to 346. But it must be borne in mind there is a physiological variance of white corpuscles; this is transitory and will soon pass away; however pathologists agree, that in leucæmia, the proportion of the latter at the minimum must be 1 to 20 of red corpuscles; and may be as much as 1 to 1, as in a case reported by M. Vidal. In other words, the blood may be more than half white corpuscles; as the white cells are larger than the red corpuscles. I may state with great confidence that at pres-

ent, at least, our patient does not have leucocythæmia. What is the matter with her? Trousseau proposes to call it Adenia.

We owe a debt to a dead Englishman, which the slow justice of forty years should see fulfilled; and to my mind it would seem as fairly due to Dr. Hodgkin to call this disease after him, as to have named the kidney, leaking albumen, Bright's Disease. As we have acquired more accurate knowledge, one after another organic lesion of the kidney has been eliminated, so that the name, Bright's Disease is become significant of specific organic lesion. Dr. Hodgkin could not have known in 1832 some of the cases of generalized lymphatic disease were leucocythæmic, for Virchow did not make the discovery till 1847, fifteen years later. But what is left ought to be called Hodgkin's Disease. Besides, it may be urged, what is gained by the new appellation? Trousseau admitted there were objections to it; that the term would be equally applicable to a scrofulous or tubercular condition of the glands. Without prejudice in the matter, I prefer to retain the English name.

Morbid Anatomy.—Trousseau says: "All observers concur in stating, that the envelope and stroma of the gland do not undergo any change." "There is only a hypergenesis of cells and lymph nuclei, which cells and nuclei, nevertheless are perfectly normal." Microscopic investigation and chemical analysis are important to reveal the source of trouble in the hypertrophied glands. "This is equally the case with the blood; yet it is impossible to get rid of the belief that the blood is morbid, and if evidence were wanting of blood dyscrasia, it is furnished in the anæmia and cachexia, under which they succumb, if not cut off by asphyxia." "At the autopsy of the tall soldier, Victor R., in Hotel Dieu; the serious lesions were ascertained to be confined to the spleen and lymphatic glands." The intra-abdominal masses were made up of pelvic, lumbar and aortic; the mesenteric, mesocolic, gastro-hepatic, gastro-spleenic, and pancreatic glands."

In a case reported by Dr. Potain, Peyer's glands and glandulæ solitaries were also affected. The chyliferous system is usu-

ally less involved. "In no case did the liver present any remarkable alteration."

In Virchow's famous book on Tumors, Lecture 21, "Lymphosarcoma," you will find to be a minute description of these enormous glandular growths. He would distinguish it by this appellation, as expressive of great hyperplasia of the glands. This volume was published in 1865, a year or two before the Paris Professor had issued his voluminous work on "Clinical Medicine."

Virchow says a patient came to him from Paris in 1863, whom distinguished physicians there had treated for leucocythæmia, but that he did not have the disease—that it was something else. One may not repress a smile at this, for that man had been to M. Trousseau.

It was a party who had otorrhœa of the left ear, followed by engorgement of neighboring lymphatic glands; then rapid involvement of those on the right side, and speedy generalization of the disease.

The cervical and axillary glands were enormous. This was his condition when he left Stockholm, January, 1863, to consult the learned Paris Professor. He put him on sublimate baths and a tonic course. The patient did not improve. He suffered dreadfully, and wrote, "that he continued in a state of great debility; that being unable to lie on his bed, he was compelled to pass his nights in his chair; and that as soon as he attempted to stretch himself, he was seized with oppression at the chest, and felt a sense of constriction in the respiratory passages," In June of that year he went to Berlin, and was put under different treatment by Virchow.

M. Trousseau was of opinion that the latter physician had considered it scrofula. He died the following January, 1864. Virchow had a pailful of glands sent to him for microscopic inspection, but found no sign of scrofula. The following year he published his book, and gave an account of this post-mortem. "The vessels of the neck were surrouded with these tumors; they were strung along the trachea and bronchi, and huge

masses of them filled the anterior mediastinum, extending down as low as the ensiform cartilage. The abdominal cavity was filled with them, and every lymphatic in the body was affected.

A strong circumstance to Virchow, the microscope threw no light upon the disease, as nothing pathognomonic could be found. All the gland elements were present in great abundance, but no adventitious growth. There was simply prodigious hyperplasia, nothing more.

He divided the swarm of tumors into "large" and "small" "Lympho-sarcomata." The former being whitish and softer than the latter, from a less amount of fibrous stroma; the latter being yellowish and harder from a greater amount of fibrous stroma. He could not go further than this, as its etiology was a quagmire he was totally unable to bridge over with the lenses of his microscope. He gave it over as a specific, and incurable.

Without debating the question as to which of these great men is due the credit of awakening public interest in this old candidate for place in the nosological table, an impartial scrutiny of all the facts that have come to light, leads us to the conviction, that up to June, 1863, the time M. Trousseau's patient visited Berlin to consult Virchow, nothing was known of the specific nature of this affection. That the leader of clinical medicine at Paris, and the chieftain of cell-pathology at Berlin were eqally in error, there remains not a reasonable doubt. Trousseau had seen persons similarly affected, is also a matter of record, witness the case of Amussat's, in which he had performed tracheotomy; also the case in one of the wards of his hospital, the Hotel Dieu, to which Dr. Bonfils called his attention ten years subsequently. But it was not until seven years later than this event, the year 1863, fully eighteen years after the death of his first patient, that M. Trousseau would seem to have thrown all the powers of his great intellect into this new subject of pathological research.

On July 19, 1863, the tall soldier, Victor R., died in the Hotel Dieu; and perhaps stimulated by unfavorable reports of his other patient, then five or six weeks at Berlin under Vir-

chow, who had differed with him in diagnosis, in so far at least that the case was not leucocythæmia, he determined to make a most searching investigation, including microscopic examination of the diseased structures. Accordingly on July 21, 1863, thirty-six hours after the demise, an autopsy was made, and every minute circumstance duly noted.

No part of that soldier's cadaver went uninspected. If he had had suspicions, he now had conviction of the specific nature of the affection. He at once went to work gathering up all the cases he could find over France; over continental Europe. Five or six months after this autopsy, the patient in Berlin died; another investigation took place. The clinical history of this man, followed by negative microscopic results, gave Virchow a shock. The disease had proved malignant, but the microscope had ceased to be an oracle. Nothing could be found in all its expansive territory but simple lymphoid cells in great abundance—a hypergenesis of lymphatic cellules.

The science of Berlin and the science of Paris came together at this quagmire; came by different routes, but were once more in accord.

Trousseau abandoned the microscope, and went on working out its clinical history. He gathered up from far and near, keeping the most minute details of every member of his Adenia Family. That there is a striking family likeness, legibly, indelibly, terribly stamped on every individual of this group, no one will dare to question who would have his opinion respected. He has worked out the problem, and henceforth the medical world will believe in Hodgkin's disease.

Mr. President, I will now exhibit you a picture of the acute form of this glandular disease, in which the cervical explosion was terrible, destroying the patient by asphyxia. It was the first of the three celebrated cases which came into M. Trousseau's hands in 1863, and died near Fountainbleau in the summer of that year. Of the other two, one died in a ward in the Hotel Dieu, July 19, 1873, the other at Berlin, January, 1864.

The picture is terribly accurate, drawn by the master hand of that inimitable artist.

"On the 5th of April, 1863, I sent back to Bonnevan a patient who consulted me for the first time in February of that year. He resided in the vicinity of Fontainbleau; and his ordinary medical attendants were Drs. Escalonne and Leblanc.

N., by occupation a wheelwright, was sixty-eight years of age. He had always enjoyed excellent health. In October, 1862, he perceived a small, perfectly evident tumor in the neck, to which he attached no importance. A month later he had, as it were, an explosion of tumors in the neck, axillæ and groins.

When I saw him in February, 1863, three months and a half after the first appearance of the tumors, the neck was deformed by a multiplicity of round, elastic tumors, which were blended with one another, or soldered together. The tumors in the axillæ were specially remarkable for their size; those in the groin were not so large. I could not feel any in the abdomen. There was no hypertrophy of the spleen.

The complexion was good, and the general health was excellent. I prescribed baths medicated with bichloride of mercury, and the internal use of the tincture of iodine. When I next saw the patient, I was struck with the increased size of the tumors. The neck was monstrous, being in circumference as large as the head, and having a frightfully lumpy appearance. In front of each ear there was an enormous, vertically situated, long-shaped tumor, which was joined below to a circular band of other tumors occupying the submaxillary and lateral regions. The face, fresher and more florid than is usual in an old man of sixty-eight, was, as it were, set in a frame formed by a mass of tumors occupying the neck anteriorly and laterally, and situated in front of the ears.

At the base of the neck and behind the clavicles, were numerous tumors embedded in the muscles and extending into the chest. There were likewise engorged glands at the back of the neck, reaching to its back. Under the axillæ the swelling

had quite a monstrous appearance. In each arm-pit there was a tumor as large as the head of a full-term fœtus, looking like a large mamma, multilocular at its base, and resting on a mass of engorged glands. In the groins, the tumors were smaller, though of considerable size. The liver was slightly hypertrophied. The spleen was healthy. The complexion was excellent and the health was good, but respiration was difficult, and whistling and mucus râles were heard in the chest. The voice retained its normal tone and character, showing that the larynx had not undergone any morbid alteration. Compression of the trachea and bronchial tubes was probably the cause of the whistling respiration.

During the following month I saw him for the third time The glandular tumors had acquired a still more monstrous size.

Although those in the anterior part of the axillæ had acquired an aspect giving them the appearance of mammæ covered by a net-work of veins, I did not discover any œdema of the hands.

There did not seem to be any loss of health, and the appetite had improved; nevertheless, it was easy to make the gums bleed. Neither the spleen nor liver were hypertrophied. The abdominal glands were larger and more numerous than in the previous month.

I recommended the patient to continue the use of tincture of iodine inwardly, and to take, thrice a week, sublimate baths. The pain and slight redness which I had observed in one of the tumors of the right axilla, led me to hope that these tumors might lose their hardness and be absorbed. I knew, however, that adenia never terminates in acute inflammation and suppuration of the glands.

At first, the patient found himself the better of the treatment which I had recommended; but I afterwards learned from Dr. Escalonne, that the cervical and axillary tumors had acquired an extraordinary size, and that compression had rendered the trachea impervious to air. The patient died in a state of asphyxia, no other morbid conditions having apparently

been induced. The tumors did not suppurate. This graphic picture represents the acute form of the affection, in which the patient is sent to death by rude strangulation.

The converse is the case in the chronic form, in which the cervical lesions are not so great, but the abdominal tumors enormous. In this form death is brought about by deep anæmia. He don't die asphyxiated, but sinks through sheer exhaustion. The soldier who died in Hotel Dieu, Paris, represented this mode of death. M. Trousseau speaks of some cases in this class living as long as five years.

Etiology.—We come now to consider that quagmire where Virchow and Trousseau met and abandoned their microscopes in despair—the nature, the etiology of Hodgkin's Disease.

The nationality of the Frenchman told wonderfully in M. Trousseau's favor; his temperament was mercurial, elastic, hopeful. He struck off in another direction; closely followed its clinical history; watched its mode of invasion; its conduct during the invasion. Nothing had been unearthed from the ruins after life had become extinct, but the fact already announced, of universal lymphatic engorgement. He discovered death brought about in the two modes, as above cited. In the former, he watched the cervical ganglia taking on increasing engorgement, break their ranks, and rout out all the anatomical relations God had established in the beautiful triangles of the neck. He saw them mob the muscles, blood vessels, nerves, trachea; pushing them asunder; pushing them together; bending, contorting, forcing them upward, outward, inward, downward, till all the natural boundaries were lost in hideous deformity of monster growth, so graphically described by M. Trousseau, in the old wheel-wright, who died near Fountainbleau.

In that other mode, he watched the tall soldier, Victor R., struggling in the midst of an unknown current, drifting down to certain death, and labored to save him. He beheld him sink exhausted beneath the murky waters. It was dreadful; it was terrible; it could not be prevented.

You are aware that out of the abdomen of this cadaver a mass of lymphatic glands was removed as large as the head of an adult. But the mystery was not explained; for the great explorer, after the most persistent essays, failed to discover the source of the current.

After awhile he made up an opinion, and, true to himself, being ever brave and frank, he made known that opinion.

Whether he was correct is a question of grave doubt in my mind. Great men are not invariably correct, but they announce ability even in their errors. But before we weigh the evidence, pro and con, the data of that opinion, I would briefly direct your attention to a statement made by Dr. Hodgkin in relation to the etiology of this disease, and conclude this monograph in debating Trousseau's opinion.

Dr. Hodgkin says: "It appears to be a primitive affection of these glandular bodies; and there is no reason to suppose it due to scrofula or to inflammation; nor, indeed, to the formation of any adventitious structure, but a general increase of every part of the gland." I object to the word "primitive," used in any other sense than that expressive of the first *visible* link in the chain of morbid phenomena; and we shall presently notice this is not altogether correct, as irritation of a neighboring mucous membrane has been known to precede the lymphatic engorgement, in at least four cases out of twelve reported by M. Trousseau. And you will remember our patient has a winter coryza. If a zymosis, these perturbed glands but announce the footpath of the poison, and we should look deeper than these glands. If "simply hypertrophy," as he alleges, I apprehend the first link in the chain to be disturbance of the vaso-motor centres presiding over the vascular supply and nutrition of this special set of organs.

From *this shore* starts out that physiological wave whose altered dynamics eventuates in hypergenesis; in this instance the hypergenesis of lymphatic cellules. But the *nature* of this disturbing cause; the character of the pebble that starts the wave, is subject of painful conjecture and future investigation;

an investigation that would look beyond the hypertrophic glands, the crest of the wave, to that point where the *ripple* begins, and the materies morbi, the fons et origo mali invaded life. It is something more than simple hypertrophy of the glands; something graver than perversion of nutrition from accidental physiological disturbance of appellate nervous centres. Can all these centres be perverted unless a poison circulate in the blood or through the lymphatics?

We will return to M. Trousseau. He concluded it to be the offspring of a diathesis. What diathesis? Not scrofulous, gouty, rheumatic, scorbutic, tubercular? None of these. It was a distinctive constitutional disease having characteristic local announcement in glandular hypertrophy.

Being glandular, he called it Adenia; now place the term diathesis in juxtaposition, and you have the compound word adenia-diathesis; more properly adenic-diathesis. "This diathesis has some obscure determining cause to excite its manifestations." What that cause is he could not determine, but calls attention to the circumstance, that four out of twelve cases have had lesions of the nasal, ocular, or aural mucous membranes; an otorrhœa, a dacryocystitis, a chronic coryza. That the disease first begins in the neck in small induration of several of the submaxillary and cervical glands. That in one of the cases reported by Ledente, and in one reported by Perrin, the axillary tumors were the first noticed; but that subsequently they discovered submaxillary engorgement. That it is possible in these cases the adenopathia of cervical lymphatics may have been overlooked on account of their diminutive size in the earlier stage of the affection. I confess this might have happened in my first patient, as the mammary tumors were large and painful, and believing it primary carcinoma, I don't remember that it occurred to me to examine the submaxillary glands. They might very readily have been overlooked; however, the next time I saw Mrs. C., the cervical region was thickly embossed with almond-sized lymphatics. In Mrs. K., the disease *began* in small induration of several of the submaxillary lymphatics.

Sometime after the disease becomes generalized an anæmia is established.

In London, they speak of a "lymphatic anæmia"; an anæmia witnessed in deep leucocythæmia under which the patients succumb. M. Trousseau thinks the term a proper one, and suggests its application to those cases of adenia in which the patient seems to die of sheer exhaustion. I humbly submit, the use of the term "lymphatic anæmia," at present used to distinguish the closing stages of leucæmia, if applied to this affection, might lead to confusion. Would not the word of his own coinage, being distinctive in itself, be preferable? Adenic anæmia would infer a difference between these diseases, and erect a barrier to prevent their confusion.

If there is no parallelism in fact, there should be none in language. Trousseau believed in adenia, there was modification of the component elements of the blood-cells, but did not suggest the nature of the modification.

In conclusion, let me call attention to some thoughts of my own. Let not the attempt be made to restrict liberty of thought on this subject, for there are some things left unexplained in the revealed phenomena; some circumstances that will never rest. Let it also be kept in constant remembrance that the science of medicine is not the personal property of any man living or dead. But a great vineyard, whose gates are always ajar day and night, that who would may enter and eat grapes and plant a vine. But let him see to it, that the vine have roots; ample roots; that may reach out in the warm alluvial soil, and grow, and blossom, and bear fruit; for if it have not such vitality, it will surely die and be trampled under foot, and its name be no longer heard among men.

What I have to offer are only suggestions, but I would have them remembered.

I would again call attention to a significant fact; one that annoyed Trousseau, and, in my opinion, is fatal to the theory of a diathesis: The early involvement of the submaxillary lymphatics; the very *limited* amount and seeming insignificant

character of the affection; little indolent glands; so painless the patients never said anything about them; so small they had to be hunted for to be found. If they had been noticed, they were neglected and forgotten. All at once an explosion takes place; large tumors form in the neck, axillæ, and inguinal regions with incredible haste; they invade the entire domain, rushing downward from the neck.

Those little obscure glands are all these weeks incubating and hatching infection that hunts up every lymphatic gland in the body, where it takes up its abode, and starts it off on its hypergenesis. It dwells in lymphatic tissue; cancer goes everywhere; so does scrofula. The proximity of these diminutive glands to an external mucous membrane; the period of latency that intervenes before the infection; finally the explosion.

How strikingly like syphilis all this sounds. But it is not syphilis; for the sublimate baths in which Trousseau put his patients made no impression on the disease. If it be another form of this infection, a quartenary syphilis, mercury has lost its power to expel it, and is impotent. It is something like syphilis, but more unmanageble, more terrible. Because it is not syphilis, is that sufficient reason for abandoning the theory of imported infection? I opine not; unless we are prepared to believe that all animal poisons, all concoctions of diseased conditions are known to the Profession. There are grave reasons for believing otherwise. The earth is full of infection. Where do they enter the body as a rule? The answer is, at the mouth. The mouth is the open portal of all the ingesta. Through this cavity and the one adjoining, pass all the gases to and from the lungs. Noxious solids and fluids are constantly passing over these membranes. Day and night, germs of zymotic poison are slipping into our bodies. We drink choleraic poison unawares; and paludal poison, typhoid poison, the poison of small-pox, and yellow fever; yea, even syphilis, detached from the linen or the fingers, or in some other way, has been known to get into the mouth primarily. May not the question

be asked, with some propriety, what does not go down our throats that can get down?

In view of all these facts, is it to be deemed an incredible thing that a poison, as yet unknown to science, may lodge in a cyst of mucous follicles, or falling on an abraded surface, pass hence into the absorbents? This is a favorite route.

But glandular tissue is only affected by this infection. Is there anything too absurd for belief in this proposition?

Iodine induces atrophy of glandular tissue. We give it with that object in lymphoid engorgement. M. Trousseau gave it with great persistence to his adenic patients, having this end in view. More than this, healthy mammæ and testes have been spirited away by it. May there not exist a poison potent in the opposite direction? One that produces enlargement, occasioning hypertrophy of these organs?

The story of this strange malady, especially that portion of it that relates to the prodrome of small, indurated, cervical lymphatics, ere the explosion takes place, and lymphatic disease becomes generalized, prove it to be a member of the growing family of zymoses. One slower in action than some other members of the group. Slower than typhoid poison, but not more tardy than syphilis. Slower than glanders, but not less fatal. Man takes "glanders" from the horse. I have seen one of these terrible cases, and after he died, I reported it in the "Boston Medical and Surgical Journal." The young man had caught the infection from his horse. Is there nothing we can take from the dog? Absolutely no *infective* disease? Are you certain of this? *I am not so certain.* He is always about us; importuning us with his muzzle; sticking it about our face, our mouth especially. If he labor under constitutional poison at the time, is there not danger of transmission? We love him, and try to aid him in his ills; may we not unawares go further than this and absolutely catch his sickness? Again, don't the very rarity of the disease prompt suspicions against the theory of a diathesis? Would it not be more common?

All the other diatheses are quite common. Cancer is abundant; so is scrofula.

To conclude, who is stricken with Hodgkin's Disease dies. Death surrenders not up the mystery of his taking off. Had M. Trousseau lived; his splendid opportunities for clinical research; the interest this strange malady had excited in him; his great zeal; his wonderful knowledge and powers of observation, would have promised more. Alas, the brilliant light of that extraordinary genius is extinguished by death, and the shadow of its going out, a sudden darkness is upon all the civilized earth. It is abroad in our heart making sad proclamation, "Trousseau is no more."

Since writing the above, my attention has been directed to a paper published July 1, 1871, "American Journal Medical Sciences, by Horatio C. Wood, Jr., M. D., physician and lecturer on Clinical Medicine at the Philadelphia Hospital; "On the Relations of Leucocythæmia and Pseudo-leucæmia."

After careful perusal of the four very interesting clinical cases with the revelations of the autopsy of each case, it must be admitted they give occasion to most important suggestions as to the functions of bone medulla, and its corresponding influence on hæmatosis.

I hope gentlemen having control of medical hospitals will see the propriety of following up Dr. Wood's inquiries, first propounded by Professors Neumann and Waldyer, and give account of the endosteum and bone medulla of every lucæmic cadaver. But it must be borne in mind, to be pathognomonic, such lesions should be present to a greater or less extent in *every* case; and should be absent in the bones of *every other* cadaver. I would make this suggestion, that in all probability it is only a complication, resulting in engorgement and inflammation of the bony tissue, as frequently happens in the soft tissues in low conditions of the system. In traumatic osteo-myelitis the fat cells disappear and pus cells are thrown out in abundance. If the migratory theory of the pus cells be the correct explana-

tion of the suppurative process, then there is nothing left of this new theory.

Without unduly extending this paper, I will simply say, that none of Dr. Wood's papers represent the subject of this monograph.

Case 1 had perturbation of the lymphatics, but it was not *sufficient;* besides it was the *sequel* rather than *precursor* of anæmia and cachexia. *The liver was also enlarged.*

Hodgkin's disease is *characterized* by *prodigious* lymphatic hypertrophy, and *entire absence* of anæmia, for a comparatively *long period;* the various functions remaining *normal.*

Deep cachexia is the *last link* in the chain of morbid phenomena, and happens only in the *chronic* cases.

ART. II.—THOUGHTS ON MILK-SICKNESS. By L. B. JOHNSON, M. D., Walhalla, S. C.

Perhaps there is no disease of such frequency and accompanied with such fatal results (while there is so little known of its etiology) as milk-sickness.

This disease in the human subject is caused from eating of milk; butter and raw or partially cooked flesh of the herbivorous animals that have been exposed to the deleterious influences of this peculiar poison.

We propose, first, to show that such a disease does exist; second, the nature and some of the peculiarities of this disease; and third, the symptoms, treatment, etc.

1. *As to the Existence of Milk-sickness.*—The existence of this disease among cattle is acknowledged by all stock-raisers throughout the whole range of the Alleghany mountains. The northwestern part of South Carolina, northeastern part of Georgia, and the whole of the western part of North Carolina is known to be infected with the peculiar poison producing milk-sickness; and I am told it is also to be found along the slopes of

the mountains in West Virginia and East Tennessee, and sections of the western country.

It is never to be found on the tops of high mountains, or even high ridges. It is usually found in the deep, dark and fertile valleys of the mountains. Stock generally are not affected with this disease till the latter part of summer or early autumn. It is not though, as thought by some, that the poison is only in existence during the above time mentioned, but that cattle prefer feeding on the ridges and slopes of the mountains, and never go into the deep valleys until the heat and drought of summer, and constant feeding have exhausted the grasses on the ridges and slopes of the mountains; it is then that the cattle overcome their scruples as to annoyances from flies, and the great difficulty in ascending the mountain, to return to their usual stamping-ground.

When once in the enchanted ground, they find the rich pasturage of grass and pea-vines so far superior to that of the hills that they are apt to remain over night, and just so soon as they remain one night in the infected locality, they will, as a natural consequence, feed on the vegetation either during the night or before the evaporation of the dew next morning, and thus receive the poison.

I remember during a month of September, while passing through one of the deep gorges of the mountains near the base of Mt. Pisgah, in North Carolina, of seeing some dozen or more fresh carcasses of cattle that had strayed into the infected district, and no kind herdsman being at hand to drive them out, they perished near the spot where they received the fatal poison.

Parties have lived for years in the immediate vicinity of these infected localities, and by observing the established rule of driving their cattle up before night and never turning them out in the morning until the dew has dried off, they never suffered from the disease; while others disclaiming any belief in such doctrine, allowed their stock to roam, soon paid the penalty for their unbelief by parting in death with one or more of

the loved ones. It is frequently the case that the localities in which this poison resides can be accurately defined, and when the dimensions are small they are enclosed, thus making it perfectly safe for the cattle to run at large, and the farmers use the milk and butter with impunity.

2. *Nature and some of the Peculiarities of Milk-sickness.*—Cows giving milk never suffer from the disease, the poison being eliminated by the milk. The poison while in the milk is always to be found in the cream, and consequently in the butter, and never in well-skimmed milk.

Mr. H., a widower, had a favorite son Henry. Mr. H. and his son Henry would drink of the cream of the milk entirely, giving to the smaller children the skimmed milk. Mr. H. and his son had no less than three different attacks of milk-sickness during one season, while the others of the family using the skimmed milk were unaffected.

The severe frost of winter renders the poison inert, while the cultivation of the soil where it is known to exist will effectually destroy it. Heat also destroys the poison, whether in the milk, butter or flesh, the opinion of Prof. S. H. Dickson to the contrary notwithstanding. I have inquired of a great number of people living in various milk-sick regions as to whether cooked beef was ever known to impart the disease, and the invariable reply was, no.

In the month of October during the latter part of the late war, when many persons were sorely tried to keep soul and body together, I knew Mr. L. to butcher a beef that had actually fallen in a dying condition in a drove by the road-side; the beast had all the symptoms of milk-sickness, and its disease was so acknowledged by the drover. Upon inquiry of Mr. L. if he was not afraid to eat the poisoned meat, he replied, no; that "he would immediately barbacue it, that is roast it over a fire, and before eating, cook it done, and then there was no danger."

If cattle partake of the poison to a limited extent only, it may remain latent in the system, and be gradually eliminated

from the body, unless they are exercised to such an extent as to overheat them.

Standing one autumn day watching the approach of a drove of cattle, the herdsmen were rushing them, though the day was exceedingly warm, my little son S. ran outside the gate to view the drove; I noticed the wild and excited look of one of the steers, and the moment he saw S. he rushed at him with all the fury of a maddened bull and butted him down, not stopping, however, after he was down, and the next instant the steer fell powerless, paralyzed, to the ground; in this condition he remained two or three hours, when he became cool and perfectly quiet, and after a few days rest was moved on to market, probably to poison some unlucky lover of *rare* beef steak.

This excited condition and disposition in cattle to fight when overheated and the consequent paralysis, I have often observed, though this excited condition I have never seen except when overheated from racing, which is often done before butchering as a test of the presence of the disease, hence it is, the disease is more frequently observed in oxen. Persons suffering from milk-sickness are extremely liable to relapse.

Mrs. S., who suffered from milk sickness during the fall of 1873, applied to me for instructions how to treat her case; I directed a chief reliance on podophylin and castor oil; she was soon convalescent, and for some six weeks continued to do well, sitting up and walking about the premises.

Christmas week she expressed a desire to visit the village. Her husband objected, it being very cold, and snow on the ground. She was, however, inexorable; went to town; unavoidably exposed herself, and eat freely of candy; returned home and died, unexpectedly to her family, the next day.

Two children, about seven and nine years of age, respectively, sickened at the same time from drinking milk. On the fifth day they were convalescent. I saw them that day at 10 A. M. They were sitting up on the bed playing; bowels regular; free from fever; and a desire to eat, and go out to play. On the sixth (next) day, I called at the same time in the morn-

ing and found both children in a dying condition. On inquiry, I found they had continued improving and had gone out early in the morning in their gowns only, and played on the ground for some time. They had also eaten heartily for breakfast, and died within a few minutes of each other about 1 o'clock P. M. same day.

Persons that have suffered from severe attacks of milk-sickness and recover, are often affected thereafter (and especially after a little exhaustion) with paralysis agitans. Mr. R. suffered from a severe attack of milk-sickness in his young days, and was afflicted the remainder of his life with shaking of his limbs.

Mr. and Mrs. H. sickened one night after eating of milk, butter, and bread. After many days of the most excruciating suffering recovered, and both continued to suffer from shaking palsy; Mrs. H. to such an extent that it causes considerable impediment to her speech.

These troubles are considerably increased by overheat; hence it is that fox and deer-hounds, after eating of the flesh of animals having died from milk-sickness, are ever after unfit for the chase. They may seem apparently well and are taken out in the drive, and frequently before the chase proceeds an hour the dogs are prostrated, and sometimes days elapse before they are able to return home.

Symptoms and Treatment.—Acute attacks are usually ushered in with pain in the stomach, nausea, and vomiting, together with heat and a burning sensation in the stomach and great oppression in the pericardial region, thirst, dry skin, and most obstinate constipation, tongue white, with the edges red. The retching, vomiting, and depression of spirits are constant and terrible to witness; the body emits an odor peculiar to the disease, and is recognized by the mountain people the instant they enter the sick room. In the latter stages of the disease there is great oppression of the præcordia with occasional vomiting. "The countenance is expressive of deep gloom and anxiety; the mind is distressed and dejected." Pulse small

and frequent; tongue dry, smooth, and brownish. The above are the chief symptoms of this peculiar, though formidable, disease.

Treatment.—In the first stages, the chief reliance is on purgatives and counter-irritants. My plan of treatment has been just to give podophylin in large doses, followed by castor oil, aided by enemas; giving from eight to sixteen ounces of castor oil in eight hour's time. If this fails to produce a free action in a reasonable time, I then resort to croton oil in four or five-drop doses, repeated every three hours until the desired effect is attained, and I have never failed to procure an operation and consequent relief from croton oil. The bowels can generally be controlled after the first two or three discharges by the use of citrate of magnesia. Blisters to the epigastric region, friction and sinapisms to the extremities are sometimes used with seeming good effect. In the secondary stages it will be found necessary to sustain the sinking powers by stimulants; turpentine emulsion will frequently be found of service, combined with quinine; and, in some instances, brandy will be found an admirable stimulant; the natives preferring peach brandy. I must admit, however, that I never saw much good from "peach and honey." During convalescence, the patient should be protected from cold and damp weather by wearing flannel next the skin, and sedulously guarded against any unnecessary exposure to inclement weather, or imprudence in diet; and every precaution should be used to protect the patient from relapses, as they terminate fatally.

Remarks.—Of the causes producing this disease there is nothing positively known. In fact, I know of no instance where any successful effort has been made to discover the actual nature of the poison producing milk-sickness. Many of the symptoms would indicate poisoning from some of the salts of lead. But if the poison is an exhalation from any of the minerals, why its destruction by the frosts of winter and the cultivation of the soil? On the other hand, is it of vegetable origin? If so, why not as virulent at midday as at early

morn? If it is of that class of active irritant poisons that some have supposed it to be, why does it not sicken the milch cow? Why are not her stomach and nervous system affected by this poison while it is being passed through the system? So far, these questions have never been satisfactorily answered. I am satisfied, however, that a practical chemist, with two or three assistants or laborers, could ascertain during one season the true cause of this troublesome and vexatious disease.

ART. III.—DR. ESMARCH'S BLOODLESS OPERATION ON THE EXTREMITIES, WITH CASES. By PAUL F. EVE, M. D., Nashville, Tenn. [Prepared for the State Medical Society.]

"That man is not the true discoverer of any art or remedy who first says the thing; but he who says it so long, so loud, and so clearly that he compels mankind to hear him."—SIDNEY SMITH.

Columbus, then, was the true discoverer of America, although he found it populated, undoubtedly from the old world, whence he came himself—so likewise is Prof. Carl Esmarch, M. D., of Kiel, Denmark, the true author of the bloodless operation on the extremities, for though others may have elevated the limb, or even recommended a roller to diminish the circulation in it, he it is who has certainly carried out the suggestion and reduced it to a safe, efficient, and successful method; one, too, of general application to nearly all operations on the extremities. Whether the rubber bandage and elastic tourniquet be new or old, the writer is free to confess that it was unknown to him. He was taught, and in turn has heretofore always taught, until last winter, that to arrest hæmorrhage, even temporarily, just the reverse, the *in*-elastic should be used. Now, thanks to Dr. Esmarch, we can operate upon the extremities without the least apprehension of hæmorrhage; in fact, as if upon the cadaver itself. He who has introduced so important an improvement in our operative procedures, merits the highest honors of the Profession, and should receive a rich reward.

The agents used for controlling the circulation in the follow-cases cases cost less than two dollars, and were made extempore of the third thickness of dentist's rubber-dam for the bandage, and ordinary elastic tubing for the tourniquet; so simple and yet so effectually did these answer the purpose, that from nearly every one who witnessed the complete success of the experiment, has come the expression, not only of approbation, but of surprise and regret, that so valuable an improvement had not been discovered or proposed years ago.

This new method has only recently been suggested, yet we learn from the medical periodicals of the day, that it is being resorted to, not only on the continent of Europe where it originated, but also in Great Britain and Canada, and is also receiving a fair trial in our own country. So little, however, was known regarding it last summer, that neither Sir William Fergusson nor Dr. Billroth, the great German surgeon, both now strenuous advocates for its use, even alluded to it in my interviews with them.

The January number of the "Richmond and Louisville Medical Journal" contains one or two notices of the bloodless operation; and in the next one, the February, 1874, is published my case of amputation of the thigh by this plan. To this is now added the account of three others performed during that month; two for necrosis, and another amputation.

The first and fourth cases present one of those strange coïncidents, remarkable concurrents occasionally met with, for which there seems to be no rational explanation. Dr. George B. Wood is said to call it a clustering of events. Here are the facts: Both ladies weighed less than a hundred pounds; are about the same age, twenty-four years; both are married and the mother of one child; received a similar injury near the tubercle of the tibia, which developed a peculiar and like disease; occupied the same locality; involved the same structures; presented the same pathological changes, and required the same treatment—amputation of the thigh, after an attempt in each

to remove the limb at the knee-joint. Lastly and happily, too, each made a good recovery.

CASE I.—*Amputation of the Thigh by Professor Esmarch's Method—Patient doing well.*—A brief history of this case need only be given as it has already been published; and again is so similar to the fourth. The operation was performed in an adjoining county on the first of January, this year. The patient being in very feeble health, the case was thought to be peculiarly well adapted to the recent suggestion, by which the loss of blood could be best prevented. Placed under the influence of ether, and kindly and efficiently aided by Drs. Ransom, Turner, Wendel, and Byrn, the affected limb was tightly bandaged by a rubber roller to five inches above the knee-joint, a soft piece of linen having previously been placed in the popliteal region to secure equable compression upon all the blood vessels. The elastic tubing, as a tourniquet, was next secured around the thigh immediately above the bandage, which was then removed. All present now noticed the pallor of the leg: and an incision into the tumor did not cause a drop of blood, nor was there any following those to expose the knee-joint, nor in the amputation next performed above it. After securing the popliteal artery, the new tourniquet was removed so as to indicate the position of its articular branches, or of any others requiring a ligature. As no blood was lost there was no perceptible shock to the system, as well as no suffering, because of the anæsthetic. The lips soon recovered their red color, and although our patient was known to be about five months pregnant, no uterine disturbance took place. Two months after the amputation she continued well, and is now approaching her accouchement.

CASE II.—*Necrosis of the Tibia—Its Removal—No Hæmorrhage.*—February 10th, 1874, was called to Smyrna, twenty miles on one of our railroads, to operate on Alice L. She is eleven years of age, and was attacked suddenly and violently thirteen months previously with acute ostitis and periostitis in

the right tibia, which resulted in the death of the entire bone apparently from knee to ankle-joint; and partial incasing of the old bone by new osseous deposits. Dr. Davis, her attending physician, now a delegate to this meeting of the State Medical Society, made several openings through the periosteum to give issue to pus and small spiculæ. For three months during this treatment of the case the little sufferer never walked.

Wrapping the diseased limb with a soft compress, and applying the bloodless apparatus as in the preceding case, then removing the bandage and covering from the leg, while the tourniquet prevented bleeding, with forceps, gouge, trephine, and short saws, the necrosed tibia, encased partially in the new deposit, was removed from knee to ankle, measuring a handfull. My friend, Dr. D., writes a month after the operation, "the little girl upon whom you operated for necrosis of the tibia by Esmarch's bloodless operation is doing splendidly well; it was the most beautiful and successful operation it has ever been my good fortune to witness."

CASE III.—*Gun-shot Wound—Removal of a Large Sequestrum from the Tibia.*—Mr. R. came from Montgomery county, Tennessee, accompanied by his physician, Dr. Darden, to obtain relief from a wound received at the battle of Chickamauga, fought on the 19th and 20th of October, 1863. A minnie ball then passed between the bones of his right leg, in its middle third, injuring chiefly the large bone. The wound having reöpened, now more than ten years since its infliction, denuded or dead bone could readily be detected by the probe. After due preparation and the application of the same means as in the preceding case, assisted by Dr. Foster and several medical students, a free incision was made through the cicatrix of the original wound, and the more bold, because of the reason for believing that the anterior tibial artery and nerve had been destroyed by the passage of the ball, when shot. Quite a large sequestrum was extracted; no blood having escaped to obscure the dissection of the soft parts. The patient soon after left town for his home, accompanied by his physician.

CASE IV.—*Amputation of the Thigh—Patient nearly Well in Ten Days.*—February 18th, 1874, Dr. T. W. Roddy sent Mrs. S., from East Tennessee, to consult me, with this brief history of her case: She is twenty-three years of age, married, and has a babe four months old. Two years ago she fell and struck her left knee upon a hard substance, where a tumor has since been developed. Iodine and its preparations have been tried, both externally and internally; then repeated blisters, and finally setons, which latter application seem to have aggravated the case. After consultation with neighboring physicians, without obtaining relief, she was sent to Nashville.

Dr. Buist and myself, after careful study of the case, considered it of so grave a character that amputation might become necessary, and as the patient and her family preferred this to be done at her home, she returned to East Tennessee, to prepare by hygiene, good nourishment, tonics, etc., for whatever operation might then be deemed best. This was performed on the 28th of February, when the tumor which had acquired the size of a goose egg, but of course flatter, occupied the tubercle of the tibia, more, however, developed on the outer side of it. The knee-joint was apparently unaffected, though so near that my associate in the case said it is not more than a quarter of an inch from it. We were told that the seton needles had encountered no cartilaginous or resisting substance, though the contents now felt irregular and somewhat resisting. Being pretty certain that this tumor could not be exsected, it was decided to make an exploratory incision into it, and then be directed by what this should reveal. Having prepared the limb as recommened by Dr. Esmarch, and assisted by Drs. Roddy, Clingan, Wiltse, Jones, Philip and Watkins, an incision was made into the tubercle of the tibia, and then extended into the knee-joint, giving issue to dark-colored serum, and a few drops of grumous blood contained in a cyst. Finding that the finger now introduced in the wound was easily pushed through the cartilage into the knee-joint, amputation was at once performed by converting the incision already made into the two oval flaps, as is

recommended by Dr. Stephen Smith, of the New York Hospital, and the femur divided above its condyles. Fortunately the specimen was secured, for by a more thorough examination of it the extent of the diseased joint was fully revealed. The cartilage of internal condyle of the femur was eroded, and the reflected synovial membrane from the capsular ligament upon it was of a deep yellow color. The upper portion of the tibia is a mere shell of osseous matter, and its cancellated structure was a pulpy mass. After ligating the vessels and removing the tourniquet to ascertain that all was secure in regard to secondary hæmorrhage, the usual dressings, including metallic sutures, adhesive strips, compress and bandage were applied. Reäction took place readily, and though somewhat restless the first night, when some twitching also occurred, our patient has rested quietly ever since, and has had a rapid recovery.

Five days after leaving Coltewah, her home, Dr. R. wrote that the wound seems to be uniting, the patient is cheerful, has a good appetite, and has not had an unpleasant symptom after the first night; and again on the tenth day, all the medicine required has been a dose of oil; she is again nursing her child, with almost enough nourishment for it, and now sleeps better than for weeks previous to the amputation.

Apart then from enthusiasm for recent improvements or exaggeration for new suggestions even in the sciences, the conviction is, we think, a safe one, that Esmarch's bloodless operation is a decided success, and marks an advance step in practical surgery.

ART. IV.—A DISLOCATED LIVER MISTAKEN FOR AN OVARIAN TUMOR—OPERATION. By JOHN K. DALE, M. D., Little Rock, Ark.

Miss N. L., aged twenty-four years, the subject of anomaly, resided from infancy in one of the most insalubrious districts in our State, until two years prior to operation, when she be-

came an inmate of the Blind Asylum of this city. The patient stated that about eight months ago, her attention was first attracted by a small tumor occupying the right groin, coming on during convalescence from measles, and which gradually augmented in size, rapidly extending upward, the pain and discomfort becoming so great as to necessitate the continued influence of opium. After a careful examination by the attending physician, the case was diagnosed as one of ovarian tumor. Drs. Wm. Senneker and Cross were asked to see her with him, whose conclusions confirmed the diagnosis of the attending physician; the existence of ovarian tumor.

Ovariotomy was decided upon. She was made aware of the nature of her case (as it was believed to be), the character and probable result of the operation were fully revealed to her, to which she readily consented, and was put upon preparatory treatment.

On the morning of the 24th of February, Dr. Senneker, assisted by Drs. Cross, Watkins, Dibrell, Dale, and Dodger, proceeded to operate. Incision extending from umbilicus to a point near the symphysis pubis, the hands of the operator were immediately freed from all extraneous matter, and search was made for the diseased ovary, which was found to be healthy, but displaced from the pressure of the liver. The uterus was also greatly displaced from the same cause. The liver was free and movable, very much enlarged, occupying the right half of the pelvis, encroaching upon the bladder and rectum, and interfering very materially with the due performance of their respective functions. When it became manifest that an error in diagnosis had occurred, an attempt was made to replace the organ, which proved fruitless, on account of its increased size.

The incision was closed by silver-quilled sutures, embracing the peritoneum, and five hair-lip pins and sutures completing the operation. Anæsthesia was produced and maintained by the alternate use of ether and chloroform. Patient is now doing well, three days after operation.

NOTE.—This is certainly a most extraordinary and unprecedented case.

Will not some of the medical staff of Arkansas who were present at the operation write explicitly in regard to it? It is due to science that the matter be fully examined and the interesting facts placed upon record. That one with a liver so enlarged as to encroach upon the bladder, rectum, and ovary could be "doing well" at all is marvellous indeed, but that a patient so wonderfully and unprecedentedly diseased, should be "doing well," after such an operation, is a circumstance demanding the most minute and accurate explanation. What has become of this patient? If dead, what were the post-mortem conditions revealed? If alive, is she still enduring the unprecedented martyrdom of having a portion of her liver in her pelvis; or has a conservative atrophy of this organ, a happy cirrhosis, been induced? It is hoped that those who were so fortunate as to witness the rare condition described, will also give their brethren full information as to the results.—E. S. G.

ECLECTIC DEPARTMENT.

"Carpere et colligere."

Art I.—The Siamese Twins at the College of Physicians.

A special meeting of the College of Physicians of Philadelphia was held at the hall, Wednesday evening, February 18, for the purpose of hearing the report of the Commission on the Siamese Twins, Dr. W. S. W. Ruschenberger, U. S. N., in the chair. On motion of Dr. Gross, it was, after some discussion, resolved that the "Philadelphia Medical Times" be allowed to report the proceedings of the meeting, on condition that three hundred copies of the journal should be given the College for the use of the members.

The bodies of the Siamese Twins being upon the table, the meeting proceeded to hear the report of Drs. Pancoast and Allen. On behalf of the Commission, Dr. Pancoast stated that the dissection not having been entirely completed, their report would be a verbal one, to be followed at some later date by a memoir upon the subject. He further remarked that it had been agreed that he should consider chiefly the surgical aspect of the matter in hand, whilst to his colleague had been assigned the demonstration of the anatomical peculiarities.

Dr. William H. Pancoast:

Mr. Chairman, and Fellows of the College,—Having been requested, as a member of the Commission, to open the discussion this evening, I will say briefly, in reference to this monster of a symmetrical duplex development, joined, as many of the Fellows now know, at the ensiform appendix and also here at the omphalos or navel, that at the investigation which we made on the first occasion at Mt. Airy, I made the opening incision of the body on the line for the ligation of the primitive iliac, on the right side; Dr. Allen made the incision on the left. The object was to reach the great vessels—the aorta and two primitive iliacs, and to force the injecting material which we used for embalming (chloride of zinc) up the aorta and down the iliacs until it ran from the incisions made in the fingers and toes. It flowed freely through the blood vessels in Eng, owing to the ossified condition of his arteries; the injection in Chang was, however, not so successful, owing to decomposition in the tissues and blood vessels. It was necessary to repeat the injecting process several times in order to preserve the body. The arteries of Chang were found to be very much decomposed —quite rotten, in fact.

In Dunglison's Medical Dictionary we find the scientific name given for the Siamese Twins, in the classification of teratology, to be *Xiphopages;* and by referring to the admirable article on Diploteratology of Dr. G. J. Fisher (published in the Transactions of the Medical Society of the State of New York for the year 1866), it will be found that the twins belong to the class of *Anacatadidyma.* In his classification of double monsters he makes three orders: *Order first—Teratacatadidyma;* derived from τέρας, τέρατος, a "monster," κατά, "down," and δίδυμος, a "twin." *Definition*—duplicity, with more or less separation, of the cerebro-spinal axis, from above downwards. *Order second—Terata-anadidyma,* derived from ανά, "up" or "above," and δίδυμος, a "twin." *Definition*—duplicity, with more or less separation, of the cerebro-spinal axis, from below upwards, or from the caudal towards the cephalic extremity of

the neural axis. *Order third—Terqta-anacatadidyma,* derived from ανά, "above," κατά, "down," and δίδυμος, a "twin." *Definition*—duplicity, with more or less separation, of both the cephalic and the caudal extremity of the cerebro-spinal axis, existing contemporaneously. In this order, the monster now before us might be called an *Omphelopagus Xiphodidymus.*

Thus we have the scientific nomenclature of this monster. Of course, the consideration of greatest interest to the Profession, and one of the main reasons why the Commission made such exertions to obtain this post-mortem, was that the American Profession might not be charged with having neglected an effort to obtain an autopsy, which would solve the mystery of their union. The feature of greatest interest is connected with this band—about four inches long and eight inches in circumference. In addition to this, there are other points of importance in teratology, in regard to the fulfilment of the law of homologous union, in relation to the juncture of the recti muscles and the fasciæ of the obliqus and transversalis at their point of meeting in the centre of the band. In regard to the position of the hearts, we think their apices present towards each other; but we have not yet opened the thorax. The livers we have found to approximate to each other and to push through the respective peritoneal openings in the band. We extended our incisions to the margin of the band in front. By placing my hand in the peritoneal cavity of Eng, and my colleague placing his hand in the peritoneal cavity of Chang, we pushed before us processes of peritoneum, which ran on to the median line of the band; and we could feel our fingers in the lower portion of the band, behind the median line, with a distinct layer of peritoneum between them, demonstrating at once the prolongation of the peritoneum into the band, and the complete separation of one peritoneal cavity from the other at this median line. Above that, we felt some traces of vascular connection, apparently running from one liver to the other; but this we will examine into when we have a better opportunity of carefully dissecting and examining what vascular structures

may exist. We also noticed that in turning off the flaps consisting of the anterior walls of the abdomen, the hypogastric arteries, as illustrated by the diagram on the black-board, ran upwards in each body into the band. We lost them in this way, as we think, towards the common umbilicus in the anterior inferior surface of the middle of the band.

It is probable that the two hypogastric arteries on each side passed through this umbilicus. Whether or not there were two umbilical veins, we have not yet been able to decide, nor to answer the question whether the umbilical cord was double or single and composed of the four hypogastric arteries and two umbilical veins, or whether the placenta was single, double, or twin.

We also recognized that the ensiform appendix, as shown in the diagram of each side, was prolonged and united in the middle line. On our later examination, we find that there is complete continuity of structure of the cartilages, but no true joint at the middle line, although it is possible there may be some small synovial sacs farther up. The motion is mainly due, as I here demonstrate to you by moving these bodies one upon the other, to the elasticity of the connected ensiform appendages and intervening fibro-cartilages.

In regard to the vascular connection of the band, we have not yet been able to make so thorough and careful an examination as we wished; but still, in throwing colored plaster into the portal circulation of Chang, it has been found to flow through the vessels of the upper part of the band into the portal vessels of Eng. So that the surgical anatomy of the band consists in the skin and fascia which cover it, the two separate peritoneal pouches which meet in the middle, the large peritoneal pouch, the vascular connection, to whatever extent that may exist between the two portal circulations, and the remains of the hypogastric arteries in the lower portion of the band. Thus the main difficulty in any operation for section of the band would seem to be in regard to the peritoneal processes and the portal circulation. The anastomosis which may exist between the in-

ternal mammary arteries and the intercostals in the integument in the upper portion of the band, of course would present no difficulty.

I will not venture upon any further remarks as to the surgery of the case, while there are so many distinguished gentlemen present more competent than myself to give an opinion. At the same time, operations on the peritoneum may not be considered so hazardous in this day, when ovariotomy, gastrotomy, and even Cæsarian section, are so often performed. The peritoneum-pouches themselves would not present so great a difficulty as might be anticipated, under pressure and acupuncture, by which the sensitiveness of the structure might be so altered as to permit of a section. I was informed at Mt. Airy that in Paris a surgeon had made the experiment of applying pressure upon the band, and it was reported the twins had fainted in consequence. I could not ascertain, however, whether this was from fright, design, or actual pain.

As Dr. Hollingsworth is present, it may be proper for me to mention a fact which that gentleman can corroborate, that Eng was the stronger physically and Chang was the stronger mentally. The same difference was observable in their characters. Chang was more irritable than Eng, especially since an attack of paralysis with which he had been afflicted—this being in the side next to Eng. The latter had not only to bear with the irritability of his associate, but also to support one-half his weight. Among other peculiarities, Chang would sometimes break useful articles or throw them in the fire.

In conclusion, let me say that when I turned up the skin and superficial fascia of the H incision on the posterior part of the band, I was struck with the development and strength of the abdominal aponeuroses. The fibres arched, interlaced, and developed into a strong fibrous band about a quarter of an inch wide, running around the median line, although there was no actual joint in the cartilage

Prof. Harrison Allen:

Mr. Chairman,—I will probably best discharge the duty de-

volving upon me by at once proceeding to a somewhat more minute anatomical description than Dr. Pancoast has given, this being in accordance with the understanding between us in reference to the evening's exercises.

Perhaps it would be best to point to that simple diagram upon the blackboard, before considering the subject more fully in detail. As Dr. Pancoast has informed the Fellows, there is a union of the twins at the two ensiform cartilages, which are very firmly joined in the centre, Eng's process being the more robust of the two. You will observe that there is a point of conjunction between the two processes which is not quite in the median line of the band. In the centre of the band is seen an eliptical space, which suggests to the observer the presence of a synovial cavity. It is probable that the ensiform junction is of the character of a synchondrosis, with a median bursa-like sac; neither ensiform cartilage is ossified.

Below this point, in the diagram, you see a number of differently-lined tracks. The lower one, immediately above the umbilicus, is only separated from the skin by a very delicate layer of tissue (so that, with the finger introduced into the pouch and moved, there is a decided indication of motion in the skin) on the under surface of the band.

This pouch passes across the band from the abdomen of Chang, and is lost in the duplicature of the suspensory ligament of the liver of Eng. The finger passed upward to the band from the abdomen of Eng, crosses the band above the pouch just mentioned, and is lost between the layers of the suspensory ligament of the liver of Chang. When the significance of the round ligament at the free border of the suspensory ligament is remembered, the relations of these pouches directly suggest that they have essential bearings to the umbilical vein of the funis, and may be provisionally termed *umbilical pouches.*

Above Eng's pouch, and between it and the under surface of the ensiform conjunction, is a second pouch prolonged from Chang's abdomen, which fairly reaches the peritoneal cavity of Eng, but is not continuous with it. Extending up into this

pouch from Chang's abdomen is a process which suggested to the Commission the possibility of the transit of hepatic vessels. This view was rendered more probable from the fact that a similar process passed up into the band from the liver of Eng. Accordingly, the plaster injection, colored by ultra-marine, was thrown into a tributary of the portal vein of Chang, when it was observed that the fluid passed freely into the liver of Eng, as well as into some of the mesenteric veins proper. It is my own hypothesis that this bond of union was the true hepatic tract; but in its present state, in the absence of evidence of any parenchymatous admixture about the vessels thus crossing the band, we prefer to denominate the transit as the *tract of portal continuity.*

In the fœtal condition it is very likely that this large space, the upper pouch, now continuous with the abdomen of Chang only, was entirely occupied by true liver-tissue, which, as maturity was attained, became smaller, and left an empty space. Hence I propose to call this upper pouch the *hepatic pouch,* The contraction chanced to be greater on Chang's side, in harmony, it may be, with other evidences of a weaker and less developed type, which is so apparent in many of the tissues of Chang. Now, with reference to the demonstration. As Dr. Pancoast has already informed you, the incisions in the abdomen were made in rather an exceptional manner. By reference to the parts it will be seen that the incision in either individual was located in such a way as to avoid the median line, since it was supposed from the peculiar position of the umbilicus that the remains of the hypogastric arteries would be found extending from the fundus of the bladder upward and inward along the entire length of the anterior wall of the abdomen. Besides, this incision would enable us, by continuing from below upward, to fairly open the abdomen and examine the cord, without violating the conditions by which the Commission was bound. The flap comprises the greater part of the abdominal wall, and can be best observed, from the position of the bodies on the table, in that of Eng.

You notice that the tissues are well supplied with fat; and this condition is very plainly in contrast with that of Chang. Eng's side of the band is well nourished; Chang's end of the band presents an entirely different aspect. Chang was an invalid, and the weaker half of this organism, with less strength in the abdominal walls, and in every way less tissue, than was possessed by Eng. You can mark that distinction very plainly in the two halves of the band, proving, if we had no other means of proof, that there could not be any very intimate communication of the vessels between the two.

The first point worthy of notice is that of an isolated mass of adipose tissue, evidently sub-peritoneal, which is in the position of the usual umbilicus; namely, in the median line of the abdomen, about half way up the anterior wall. This is strictly symmetrical, a similar point of about the same size being found in Chang.

Another fact equally well pronounced, is that in Chang the bladder was found very much contracted and contained no urine; it was deep down in the cavity of the true pelvis. That of Eng, however, was distended with urine; hence there was a contrast in the appearance of the umbilical fold in the two individuals, in consequence of the great difference in the actual size of the bladder.

My finger is now in the *umbilical pouch* of Chang. The motion is noticeable in the under surface of the band. On the side of Eng no such motion will be observed. I can very clearly see my finger passing between the two folds of the suspensory ligament. At this point it would perhaps be well to exhibit the drawings which have been made of the views which we have been able to obtain from this very limited incision. On looking up towards the band with the greatest possible stretch of tissue, we see the arrangement of the remains of the hypogastric arteries converging towards the bond of union. In this lower diagram we show you the livers joined by what is supposed to be the *tract of portal continuity.* You will observe

the limits are somewhat symmetrical. Here is the liver of Chang, with a foreshortened right lobe.

The remainder of the right lobe is deep within the abdomen, and of course it has not been seen. Here is the fundus of the gall-bladder, and there is the suspensory ligament, carrying the remains of the umbilical vein. When the finger is passed from Chang into Eng, it is received between the folds of the suspensory ligament of Eng. In Eng the parts are essentially the same, although you see more evidence of adipose tissue. Here is a little ligament aiding in the support of the liver, to whose convexity it is attached; it is not seen in Chang at all. You might term it an accessory suspensory ligament. When the finger is introduced behind the pouch, it is observed to terminate blindly, showing, we think, that it is adventitious, due to the presence of that suspensory ligament.

We find some vessels of the portal system, even as far down as the mesentery, and filled with the blue coloring-matter. We of course desired, as far as possible, to examine all the tissues here by these incisions; hence it was that when the bodies were in this position the skin was taken off from the wall in order to get a view of the linea alba.

[The bodies were here inspected by the audience, and afterwards turned so as to expose the posterior part of the band. Further remarks apply to this posterior aspect.]

Dr. Pancoast—While the bodies are being turned, I will take the opportunity of replying to one or two questions which have been asked me. First, in regard to the common sensibility of these individuals. According to the statements received at Mt. Airy, there was a line of common sensibility corresponding to the median line of the band. Dr. Hollingsworth says that if a pin were stuck into the band at the median line, both of the twins would feel it distinctly; but that, even at a slight distance to either side, the point of the pin produced an effect only on the twin of that side.

Another question has been asked me, as to whether either of them was ever put separately under the influence of an anæs-

thetic. I answer it by saying that so far as we know it never was attempted, but that when, upon the final occasion, Chang was anæsthetized by death, Eng was for a time unaffected. The story as told us at Mt. Airy was that Eng waked up and asked his son, "How is your uncle Chang?" The boy said, "Uncle Chang is cold—Uncle Chang is dead." Then great excitement took place. Eng commenced crying out immediately, saying to his wife, whom they called in, "My last hour is come," and finally sank away. He was in perfect health when they went to bed.

They had been sitting up in a large double chair, made for their accommodation. Eng was smoking his pipe, until he became sleepy, and finally said to Chang, "We must retire." Chang said that he could not lie down comfortably. I understand that when they went from Chang's house to Eng's house, where they died, it was against the direction of Dr. Hollingsworth; but with their usual stubbornness they persisted in riding the distance in an open buggy. To return to the narrative of the night of their death, after Chang had refused to lie down, they walked about the house for some time, and even went out to the porch, and washed their hands and drank some water. It was about 1 o'clock when they went to bed. Then Chang died, sometime between that and morning; his death not producing any immediate impression on Eng. It was only when the latter woke up and inquired about the condition of his brother, that he was at all affected.

As to the question, "What caused Eng's death?" I am not able to tell. The post-mortem which has been made does not show the condition of his lungs. Probably the valves of his heart were in a disorganized condition, and probably also the shock upon that weakened organ caused death.

Dr. Allen—In my opinion, Chang died of a cerebral clot. From inquiry at his home, I was led to believe that the lung-symptoms were not due to pneumonia; indeed, were not severe enough to have been so caused. The suddenness of the death, the general atheroma of the arteries, and the fact that there had

been previously an attack of cerebral paralysis, all indicated that the death was of cerebral origin. Eng probably died of fright, as the distended bladder seemed to point to a profound emotional disturbance of the nervous system, the mind remaining clear until stupor came on—a stupor which was probably syncopal. One thing to be settled in the making of our examination was to get the bodies in the best possible position, so that we could judge of the true nature of the band.

You will observe the great contrast between the anterior appearance of the band and its posterior aspect. When we suspended them face to face we conceived we had them in the proper position for study. On the posterior side there was a fold underneath the skin extending from the ensiform cartilage of Chang, passing over, crossing the median line, and inserted into the ensiform cartilage of the opposite twin, Eng. It was one of the objects of the examination to determine what was the nature of this fold. I judge it to be the linea alba; but I leave the Fellows to decide that for themselves. I will also add that, because we had not the privilege of cutting the anterior portion of the band, we were obliged to cut down from the point of which I have spoken, to get to the structure, and demonstrate these *cul-de-sacs* from behind.

Here (referring to the casts), from this point the incision is horizontal about midway, and joined laterally by two oblique lines which were directed one upward and the other downward and outward, making a modified letter-H incision. Thus we got all the space we needed. When I raise the skin, we see the scar of the umbilicus in the superficial fascia; and on lifting the other flap we get a better general demonstration.

And now we come upon the point of interest, namely, the position of the band and its true nature. We have a diagram here. You notice on Chang's side that there is an arrangement of interlacing aponeurotic fibres, marked here; and these fibres, starting in Chang, pass across the median line and are inserted into the ensiform cartilage of Eng. Turning the lower flap downward, the upper flap upward, and the two lateral

tongues outward, the superficial fascia is exposed. This is abundantly supplied with adipose tissue on either side, but is free from fat where it covered the band. Both the lower flap and the fascia are lost in the scar marking the position of the umbilicus. The same dissection exhibits the position of the lower pouch of Chang. Turning down the external oblique, the recti, and the internal oblique muscles, the transversalis was exposed, the latter forming a very well-defined layer in Eng, with an interval between the ensiform cartilage and the inferior margin of the thorax. These were much less marked in Chang.

Turning forward this layer of fibres in Eng from without inward, the diaphragm is brought into view. Muscular fibres are conspicuous in this position. The peritoneum on either side is now fairly exposed. Incisions may now be made with a view of demonstrating the pouches of the band. The upper pouch of Chang is, you will observe, freely opened on its posterior aspect, and the vessels in the tract of portal continuity are seen to be well distended with the injecting fluid. A small artery is seen crossing beneath this tract of veins, and is probably a branch of the hepatic; but, whatever may be its origin, it evidently could have little effect in influencing the nutrition of parts beyond the band, and is probably retained within the band itself. The lower pouch of Chang reveals nothing which was not demonstrable from in front, and the same may be said of the single pouch of Eng, thus confirming our opinions of the construction of the band before the pouches had been opened from behind.

Dr. Abraham Jacobi, of New York, being called upon, said: I am very much obliged to the gentleman who has mentioned my name. I do not believe, Mr. Chairman, that I have anything to add to the stock of knowledge in regard to the subject before us. If I were to answer the question as to how this monstrosity originated—especially whether they became connected after having been separate organisms, I should say that that idea has been given up by those whose opinions are entitled to weight. It is true that years ago such specimens were

spoken of by Dalton, in Holland; and a number of others have alluded to the idea that two such individuals might in embryonic life become united simply by adhesion, the result of their being located together in the embryo. In truth, it appears to me that at that period such a thing might be possible; but of course the union would be a superficial one, not involving the deep organs.

We know that the first epidermis is formed about the end of the fifth week of embryonic life, and that after a time it is thrown off, so that the embryo of about seven or eight weeks is more loosely covered with the real epidermis than in the earlier period. The epidermis is thrown off a number of times until about the fourth month of utero-gestation, when it is finally perfected and remains intact. Now it is suggested that at those times when the epidermis is thrown off, the connection takes place between the two individuals—just as the connection takes place between the prepuce and glans, which we so often find adherent in the fœtus and in a number of new-born children.

There are evidences, which we cannot forget, that such connections have taken place before the final epidermis is formed, and about the time one of the earlier coverings is being thrown off, at a period when the internal organs, frequently implicated in such monstrosities, are already formed. There are few double monstrosities so well developed as this one. I think the records of about four hundred monsters have now been collected in the books and journals, but very few are of such a complete nature as this. Every one has heard of the Hungarian Twins, who lived to the age of twenty-one years, in the last century. Another pair of female twins, that traveled in Germany about two years ago, were described at the time, in the "Berliner Wöchenschrift." They were of a similar nature. There are two cases on record in which a division has been successfully attempted, but in those cases the connections were not so well developed as in the Siamese Twins. The connection was in the same neighborhood, but was only superficial—of

skin and subcutaneous tissue. One of the cases is recorded by Dr. Braun ("Virchow's Archiv)." Fortunately, or unfortunately, I do not know which, they were his own children. They were of the female sex. He separated them immediately after birth. One lived three and a half days; and when the case was described, in 1866, the other was five years old. In that instance the connection—three and a half inches long—extended from the ensiform process to the umbilicus. The other case is described as early as 1689, by the old German author, Kernoch.

As far as the origin of twin monsters is concerned, I am certainly of those who are not of the opinion that two individuals could get into such an intimate connection by growing together. Certainly the connection is an original one. I believe that the general opinion is now that one Graäfian vesicle may have two ova, or one ovum have two nuclei; and these finally may, like the two vitelli of an egg, be closed together, surrounded by the same material, forming a single complete ovum; and thus it may be that the two are included in the same ovum. I think that this will explain also why the sex is always the same—why they are always both male or both female. They are male in twenty or twenty-five per cent. of the cases.

Dr. H. C. Wood here asked Dr. Jacobi a question in regard to the Biddenden Sisters, as to whether they had been reported in the works on monstrosities.

Dr. Jacobi: I do not know anything about that.

Dr. Pancoast stated that an account of those sisters was contained in a semi-popular book entitled "Lexicon Tetraglotton," published by Samuel Thomson, London, 1660.

None of the Fellows desiring to say anything further upon the subject, on motion, the College adjourned.

Statement of Eng's Widow, made to the Commission at Mt. Airy.—The paralytic stroke from which Chang had suffered occurred about three years ago, when he was at sea, seven days out from Liverpool. He had been intemperate for some time

previously, and had been drinking hard on board the vessel, being frequently intoxicated. He had never had mania-a-potu. Even when he was drunk, Eng was not affected. Two of his children had died; one from phthisis, the other apparently from apoplexy. Eng had lost five children—one each from phthisis, diphtheria, and dysentery; one from the effects of a burn, and one still-born.

Chang died Saturday, January 17. He had had a cough since the preceding Monday night. It was dry, with scanty, frothy sputum, and no pain. Left lung probably involved; slight dullness on corresponding side. On Thursday, January 15, his skin was acting freely, and for that reason Dr. Hollingsworth ordered him not to venture out; but, in spite of that prohibition, he went as usual to Eng's. At the time of his arrival he had little cough and no expectoration, but loud bronchial râles were plainly heard by those around him.

When Eng saw his wife, after learning that Chang was dead, he said, "I am dying," but did not speak of his brother's death. He soon afterwards expressed a desire to defécate, and this continued for half an hour. He rubbed his upper extremities, raised them restlessly, and complained of a choking sensation. The only notice he took of Chang was to move him nearer. His last words were, "May the Lord have mercy on my soul!" —*Philadelphia Medical Times.*

ART II.—BLOODLESS OPERATIONS; WITH A REPORT OF FIVE CASES. By M. FIGUEIRA, M. D., House-Surgeon to Bellevue Hospital.

Surgeons have sought, ever since the earliest days of surgery, to render the amount of blood lost by operations as small as possible. This is especially true of amputations or other operations in which large blood vessels are to be divided, and hæmorrhage must prove fatal unless efficiently controlled.

The dangers of hæmorrhage with respect to the patient are two:

1. Immediate death from syncope.

2. Extreme exhaustion, if the hæmorrhage is not sufficient to cause death. It is a matter of observation that patients after severe bleeding recover much more slowly and are more frequently subject to low forms of inflammation, to pyæmia, to prolonged suppuration, and internal inflammations. This is a remote but not less grave danger.

Hence different devices to control hæmorrhage have characterized and influenced the progress of surgery at different periods.

* * * * * * *

But Petit's tourniquet, although superior to any former means of controlling hæmorrhage, was not complete; for a large amount of blood was lost, in spite of the tourniquet, in every important amputation or severe operation. The main artery was controlled by it, but some collateral circulation went on all the time, and all the blood left in the limb when the tourniquet was applied was almost entirely lost to the patient, particularly in amputations. This loss of blood often turned the scale against the patient, but was considered as a matter of course, as no means were known by which it could be avoided, until a few months ago, when Prof. Esmarch, of Kiel, first brought his method before the Profession. His method of preventing loss of blood during certain surgical operations consists in bandaging the limb, upon which the operation is to be made, from its extremity to a point above the point of operation, with a roll of strong, elastic bandage drawn very tightly. At the point where the bandage ceases, an India-rubber cord is passed around the limb four or five times, as tightly as possible, and tied. The bandage is then removed, and the operation performed. By this means the blood is pressed entirely out of the limb and dammed above the point of operation by the elastic cord.

After the operation the arteries are readily seen and ligated, as there is no hæmorrhage; the elastic cord is then removed, some few points which bleed are tied, and the wound is dressed.

Nothing can be more simple or complete; yet some serious objections have been raised against this mode of operating.

It has been said that the flaps slough more frequently by this method than by the common method.

But, of twenty-one cases reported in Germany, the greater part are said to have healed by first intention.

Of five cases reported here, a part of one flap sloughed in one case.

On the other hand, out of forty amputations, by the old method, at Bellevue Hospital, the flaps sloughed more or less in twenty-four.

Others have objected that, after Esmarch's method, primary union is very rare—so it is after any other method. But cases of primary union have been reported, and Case III. shows it actually taking place after an amputation in the middle of the thigh.

Again, it has been objected that the saving of so much blood will give rise to congestion of internal organs. But patients requiring operation are generally anæmic, either from loss of blood or from chronic disease, and have to go through a process of more or less suppuration.

The above cases do not give evidence of such congestion, but, so far as they go, seem to show that by Esmarch's method:

1. Shock is much less than by any other method.

2. Patients recover more rapidly, and with fewer bad symptoms.

3. In cases where the saving of a few ounces of blood may secure the life of a patient, this method is invaluable, as is shown in Case II.

I will conclude with the words of Dr. Sands to the class, the first time Esmarch's method was used at Bellevue:

"I believe this to be the most excellent method, and one that will soon be generally adopted by operating surgeons. We shall watch the course of this case, and see whether the procedure is attended with any disadvantages."

CASE I.—John Brush, aged twenty-four; admitted Novem-

ber 30, 1873; a healthy man. On the night of admission he fell from the front platform of a street-car, and had his left leg run over. On admission, was suffering from severe shock; pulse 120 and feeble; surface cold; had lost considerable blood. Examination showed extensive laceration of anterior part of left leg, and bones projecting from the torn muscles. Dr. Sands decided to amputate above the knee by Esmarch's method. Elastic bandages were applied, and above them the elastic cord passed around the limb four times. The house-surgeon performed the amputation by the circular method, under Dr. Sands' direction. As the skin was divided and muscles cut through, there was hardly blood enough to tinge the knife, and the cut surface of the muscles was pale and dry; the divided artery could be seen distinctly beside the vein, and the appearance of the parts reminded one of the cadaver. After the bone was sawed, the arteries were easily ligated, as there was no blood to obscure the view. The elastic cord above was then removed. As the last turn was taken off, the stump became rapidly red, blood oozing freely from every point. A few small branches were tied. In a little while all bleeding stopped. The stump was dressed as usual. As the patient recovered from the effects of the ether, the pulse was as full and good as before the operation; the surface was warm, and the face had not the paleness often seen after such operations.

December 1st., A. M.—Patient did not vomit, but passed a comfortable night, and slept some time; pulse 108; respiration 32; temperature 100°. P. M.—Pulse 140; respiration 36; temperature 102°; patient feels well.

December 2d, A. M.—Pulse 136; respiration 32; temperature 101½°. P. M.—Pulse 120; respiration 36; temperature 101¼°. Dressings removed; some sloughing of edge of outer flap; wound looks well.

December 3d. A. M.—Pulse 120; respiration 36; temperature 100¼°. From this time the patient progressed favorably.

CASE II.—William Keggons, aged twenty-eight; admitted December 10, 1873; a strong, temperate man. While jumping

from a steam-car, fell and had his foot crushed by the wheels. Was brought to the city on the cars, and admitted to hospital twelve hours after the accident occurred. On admission was very pale, with cold and clammy surface, and pulse imperceptible. Left foot found crushed into a shapeless mass. Stimulants given by mouth vomited. Egg-whey given by rectum, and brandy simultaneously. Rallied in about twelve hours, and was able to retain brandy on the stomach. Pulse stronger, but intermittent. Patient now seen by Dr. Sands, who thought him not in a condition for operating upon. Stimulants and nourishments continued. Four hours later, December 11th, was again seen by Dr. Sands, who decided to operate by Esmarch's method. The leg was amputated in the lower third. Dr. Wood was present, and counted eleven drops of blood lost during the operation. About one drachm was lost while tying the smaller arteries, after the cord was removed. The stump was dressed as usual. Pulse 135, and feeble. Surface warm. After three hours, patient became restless and delirious, and vomited; pulse imperceptible. After stimulants and opium, the patient fell asleep.

December 12th.—Very feeble, and vomiting occasionally. A. M.—Pulse 144; respiration 16; temperature 102¾°. P. M.—pulse 120; respiration 18; temperature 102½°.

13th.—Patient stronger; complains of pain in the stump. Dressing removed; some redness round the flaps, and serous discharge. Sutures removed, and water dressing used. No sloughing occurred, and the patient improved steadily.

January 8th, 1874.—Was able to sit up, and the wound is now closing rapidly. Temperature has ranged from 98° to 100°.

CASE III.—Barney Mulligan, aged fifty-two; admitted October 23, 1873. Pale and emaciated. Two years ago began to have pain and swelling in the right knee, which have been growing worse.

December 29th.—Patient in fair condition. Was taken before the class, and the limb amputated above the knee, by Dr.

Sands, after Esmarch's method. Lost about two drachms of blood during the operation. Flaps united by iron sutures, and dressed as usual. Pulse, after the operation, 110.

30*th.*—Patient slept well last night. A. M.—Pulse 108; respiration 20; temperature 100¼°. P. M.—Pulse 112; respiration 16; temperature 98¾°. From this time the patient progressed favorably. The wound healed by first intention.

CASE IV.—Phillip Bittener, aged thirty-two; a robust man. In getting off the front platform of a street-car, he fell, and his leg was run over near the ankle-joint. Pulse feeble on admission, but no other evidence of shock. Examination showed a compound comminuted fracture of both bones of right leg, just above the ankle-joint. Under direction of James R. Wood, M. D., the leg was amputated by C. Teniberry, M. D., house-surgeon, on Esmarch's plan. Scarcely a drachm of blood was lost during the entire operation. The ruddy appearance of the face after the operation was remarkable. Cotton dressing was used.

The first day after the operation his condition was as follows: A. M.—Pulse 100; respiration 32; temperature 102°. P. M.—Pulse 98; respiration 32; temperature 103°.

Second day after operation: A. M.—Pulse 94; respiration 34; temperature 101°. P. M.—Pulse 104; respiration 28; temperature 103°. Patient feels comfortable, has a good appetite, and sleeps well.

January 8th, 1874, (ten days after the operation).—Patient doing well.

CASE V.—T. Thompson, aged forty-five. This man had his forearm crushed by a coal cart. Four days after the accident, the injured part became gangrenous, and Dr. Jas. R. Wood performed amputation, below the tuberosity of the radius, by Esmarch's method.

In this case the elastic bandages were applied only above the gangrenous point, to avoid infection with septic fluids. In place of the elastic cord, a piece of the bandage was used, being doubled on itself. A very small quantity of blood was lost.

January 8th, 1874, (four days after the operation).—The patient is doing very well, and there is no sloughing of the flaps. —*Record.*

ART. III.—CHOLERA IN KENTUCKY—REPORT OF PROCEEDINGS OF THE AMERICAN HEALTH ASSOCIATION.

Dr. Ely McClellan, United States Army, read a paper presenting an outline of the course pursued by the epidemic of cholera during the year 1873 in twenty-one counties of the State of Kentucky. The facts upon which the report is based, said Dr. McClellan, had been obtained by the narrative of and correspondence with some fifty medical gentlemen in the portions of the State which were infected. The Kentucky epidemic opened in McCracken county and the city of Paducah. The reports of the epidemic, as it prevailed in Paducah, are meagre from the fact that no record was kept of the cases which occurred in that city. It is estimated that the deaths from cholera, from May 23 to July 24, were 180. About two-thirds of this number were negroes; a majority of the remainder were foreigners; but few Americans were affected. The first case reported in Kentucky was that of a clerk in a tobacco warehouse, who came from Memphis, which was noted on May 23. The case terminated fatally in six hours. The next case was that of a woman who had recently left Memphis, and a woman who nursed her was also attacked and died June 15. A gentleman fifty-five years of age was taken ill with cholera in the same house in which the first cases occurred and died in a few hours. From this time the disease became epidemic, and continued in existence till July 24. No cases occurred in the jail, hotels or poor-house, and it is a noticeable fact, that after the 25th of June, on which day the sale of vegetables was prohibited, the mortality among the negroes began to diminish. This, however, did not apply to the German population, as they disre-

garded the law, and a consequence was that on each Monday a large number of this class were buried.

Dr. R. Saunders reports very strongly in favor of the hypodermic use of atropia in the treatment of cholera.

In Bowling Green, Warren county, the first case of cholera was noted in the person of a white man, who left Gallatin, Tenn., when the epidemic was prevalent at that point, and who journeyed to Bowling Green. The case was fatal. The second case was reported June 13. Cases were reported after this, and from July 14 the disease became epidemic. Eighty-six cases occurred in Bowling Green between July 19 and August 10, of which sixty-six terminated fatally. Franklin, Simpson county, has a population of 1,240 souls. The first case of cholera that occurred there was on the 5th of June, when Ann Hayes, a negress, was attacked. She recovered. June 10 another case was noted, but the first fatal case occurred June 12. Some fifty fatal cases were noted within fifteen days later. The cholera broke out in Louisville, Jefferson county, on the 8th of June. From June 12 to August 16 twenty-one fatal cases occurred in Louisville. Several cases occurred later, the epidemic dying out September 8. Elizabethtown, Hardin county, located on the line of the Louisville and Nashville railroad, is in hourly communication with Bowling Green, Paducah and Louisville. The first case of cholera occurred here July 8. From July 10 to September 2 forty-one cases of cholera occurred, of which twenty-two were fatal. Some residents near the town were fatally affected with the disease.

Maysville, the county town of Mason county, situated on the Ohio river, suffered greatly in 1849 from cholera. But seventeen cases were reported in the town this season; eleven were fatal. In Lagrange, Oldham county, cholera was epidemic from the 17th to the 29th of July. Of thirty-one cases reported fifteen were fatal. The sanitary condition of the town was bad. Hopkinsville, Christian county, suffered from cholera, and several deaths were noted in July and August. The cholera broke out in Taylor county among the negroes employed on the Ohio

and Cumberland railroad, having been communicated by persons from Tennessee.

Ravages among the Negroes.—Among the negroes the cholera made fearful ravages. In Lebanon the cholera found several victims. Lebanon is the county town of Marion county, has a large population, and in direct communication with the infected towns and cities. The town is located in a swampy section, and the lower section was most infected. From September 2 to October 1, 116 cases were reported as occurring in Marion county, with 56 deaths. The cholera was developed in the town of Lancaster, Garrard county, in August, and was confined chiefly to the negro population. The town was in a miserable sanitary condition. The number of total cases which occurred is not reported.

The epidemic of the cholera in Lincoln county was chiefly in the vicinity of the town of Stanford. Cholera made its appearance in the town on the 29th of August. The sanitary condition of the town was very bad. During the reign of the epidemic in Lancaster many refugees fled to Standford, thus communicating the disease. A number of fatal cases are reported. The only record of cases occurring in Nelson county are found in the towns of New Haven and Boston. Both of the towns connect with Louisville and other infected cities by rail, and are in the heart of thriving farming communities. The disease broke out in New Haven August 20, and is supposed to have been communicated from Lebanon. In the vicinity the cholera lingered about September 21, and several fatal cases were reported. Boston is thirty miles from Lebanon. Several deaths occurred there in September. In Adair county the cholera was confined principally to the town of Columbia and vicinity. In 1833 and in 1835 the citizens suffered severely from cholera. The cholera last visited the place last August, and was communicated from Marion county. Twelve cases were noted in the house, and eight of these were fatal. A large number of cases were fatal. The cholera visited Danville, Boyle county, on the 30th of August, having been communicated from a near town.

More than a dozen cases were reported. Washington county was severely afflicted with the disease, it first making its appearance in Springfield, a town situated nine miles from Lebanon. The history of the epidemic, as it occurred in Clinton county, is very meagre. A Mr. Bryson, residing in the southern portion of the county, after his return from Nashville, in the month of June, was attacked with cholera and died. Several other cases were reported in various parts of the county. The inhabitants of Jamestown, Russell county, had been in communication with those of Columbia during the cholera epidemic at the latter place, and by this means the cholera was communicated. Five cases occurred in the town of Harrodsburg, Mercer county, from September 6 to September 16; but one death occurred. Report shows that in Bourbon county, July 11, seven cases were reported in the town of Millersburg, all of which terminated fatally in a few hours; twenty-one deaths occurred up to September 1. The total number of cases the whole season was seventy-six, of which nine were whites. Several cases occurred in Paris.

Lessons Enforced by the Epidemic.—The history of the epidemic affords only strong evidence in support of accepted theories:

1. As to the portability of cholera poison.
2. The methods by which the disease is propagated.
3. The communicability of the disease.

In the narrative which has been presented, it will be seen that the disease entered the State of Kentucky by the distinct lines of advance upon which the original cases have been traced.

1. By navigation of the Ohio river.
2. By travel on the line of the Louisville and Nashville railroad.
3. By a solitary traveler over a mountain highway.

The mode of propagation and the communicability have been sufficiently illustrated in the detail of the epidemic, but a notable instance will bear recapitulation. The epidemic in the town of Columbia has been traced to a foul cesspool which,

filled to overflowing with putrid matter, saturated the ground in its vicinity. During the month of June and July and the early portion of August, the condition of this sink and the yard in which it was located was so disgusting that warm solicitations were made the owner to abate the nuisance. But during this time no evil results were known to have been produced; yet, when on the 30th of August the negro boy who had become infected with cholera in the town of Lebanon came there, cholera, malignant in its type, was developed, and all who lived in or came within the infected atmosphere of this place were attacked.—*New York Times.*

ART IV.—TWO CASES OF POST PARTUM HÆMORRHAGE CONTROLLED BY COMPRESSION OF THE ABDOMINAL AORTA. By JOHN G. MILLER, M. D., Pleasant Hill, Mo.

Mr. Editor,—Accompanying this I send you the report of two cases of post partum hæmorrhage, treated by copious injections, in both of which I had to resort to compression of the abdominal aorta. I, of course, do not claim any originality in the treatment, but, as I believe it is adopted by very few, I send these cases merely to draw attention thereto, and to encourage others to its use, feeling assured that some lives might be saved in this way which otherwise would be lost.

J. G. M.

CASE I.—November 11th, 1870, at 6 P. M., I was called three miles in the country to attend Mrs. S., a small, delicate woman, aged nineteen, in labor with her first child at full term. About seven I arrived in presence of the patient; learned that she had been having slight labor pains for several hours, which, at the time of my arrival, had become moderately strong and frequent. I did not think it necessary to interfere until about nine, two hours after my arrival, when I made the usual examination and found the bag of waters protruding, the mouth of the womb widely dilated, the vertex presenting, the pains reg-

ular and forcible. I immediately ruptured the membranes, quite a quantity of liquor amnii escaped, the contractions abated for a short time, but soon returned with force sufficient to complete the labor in less than one hour from the rupturing of the membranes. The child was alive—a girl—and weighed nine pounds. The placenta came away in a few minutes and the womb contracted nicely. Keeping my hand over the womb, I found that it soon relaxed, then again contracted, again relaxed, and again contracted, and so on, becoming more lax at every relaxation, and less firm and larger at every contraction, as compared with the previous contraction. I administered ergot and endeavored by friction and grasping over the womb to induce it to contract sufficiently to expel the clots that had formed and were still accumulating in it. These means had no effect, and the patient soon fainted from internal hæmorrhage, little or none having escaped externally. I now immediately introduced my hand into the uterus and removed the clots, elevated the hips, applied cold water to the abdomen, continued the ergot, friction, and grasping over the womb, and sent to town for brandy, expecting that the means being employed would soon produce the desired effect—namely, the permanent contraction of the womb. But I was mistaken, it remained perfectly flaccid; the remedies that heretofore had always served my purpose, now utterly, I might say ignominiously, failed. My patient became pulseless at the wrist, and seemed to be *in articulo mortis*, the blood still flowing. I now placed my thumb on the abdominal aorta, and by firm pressure thereon, soon completely controlled the bleeding. By this time the brandy had arrived and was as freely administered as the case would admit of; this rallied the patient some, but the womb still obstinately refused to contract. I now sent a messenger to bring to my assistance my former partner, Dr. S. L. Kennedy, of Pleasant Hill, requesting him to bring with him a Davidson's syringe and some muriated tincture of iron, and until he came —which was nearly an hour from the time the messenger started—I stood by the side of the bed with one hand in the

uterus, the other pressing over it, with my thumb on the aorta, the least relaxation of the pressure of the thumb permitting a flow of blood.

On the arrival of Dr. K., I willingly relinquished to him the control of the artery and pressure over the womb, while I introduced the nozzle of the syringe well up into the uterus, at the same time retaining my hand in it. I then threw up into the womb several quarts of cold water, retaining it or permitting it to escape by the side of my arm in the vagina, at pleasure. After washing out the organ well with cold water, we mixed with the water tincture of iron, in the proportion of a drachm or two to a pint of water, which we continued to inject into the womb. Continuing this for some time, we had the satisfaction of feeling contractions gradually come on, and in an hour the contraction was sufficient and permanent, and I felt very much relieved as well as satisfied. In about forty-eight hours the patient's pulse could be readily felt at the wrist; and she made a good recovery.

CASE II.—May 5th, 1872, I received a telegram to go to Holden to attend Mrs. H., a stout, robust woman, aged twenty-two, in her first confinement. On the evening of the 5th, after a somewhat protracted, though not a very severe labor, she was delivered of a fine, healthy girl weighing nine pounds. The patient was but little exhausted and in good spirits. The placenta did not readily come away; I used friction and grasping over the womb and slight traction on the cord, yet it still remained. As there was some hæmorrhage and the womb contracting tolerably well, I introduced my hand into the vagina so as to get hold of a portion of the placenta. Making traction on this and the cord, the placenta came away, but in such a manner as to indicate that there had been an abnormal adhesion, a very small portion of the placenta remained in the womb. With the after-birth came a gush of blood. The womb immediately contracting, the bleeding ceased. Contraction lasted but a short time, when relaxation took place, then again a feeble effort at contraction, and at the same time a fearful

gush of blood. Immediately the patient's face became pallid, and syncope was strongly threatened. As soon as possible I introduced my hand into the womb, removed clots and a small portion of adherent placenta, raised the patient's hips, applied cold water, continued grasping and friction over the womb, and yet the bleeding continued to be frightful, and the organ made no further effort to contract. I immediately introduced the nozzle of a Davidson's syringe by the side of my hand and arm, which were still in the vagina and womb. I now compressed the descending aorta with the thumb of my disengaged hand and at the same time had ergot administered freely by the mouth, and cold water injected into the womb, then tincture of iron and water as in Case No. I.

In less than an hour I had the satisfaction of feeling that the womb was well and permanently contracted and the patient's life saved, which I feel almost certain would not have been the case had I relied on the usual treatment.— *Western Lancet.*

ANALYTICAL DEPARTMENT.

"Qui e nuce nucleum esse vult, frangit nucem."—PLAUTUS.

ART. I.—THE ELASTIC LIGATURE.

On the 21st instant, Sir Henry Thompson demonstrated, for the first time in England, a surgical procedure which has been practiced for some time past by Professor Dittel, of Vienna. It consists in substituting an innocent-looking elastic thread for the formidable array of knives, tourniquets, artery-forceps, and other paraphernalia with which the surgeon ordinarily approaches the patient. Before proceeding to perform the operation, Sir Henry related the curious accident by which Professor Dittel was first led to appreciate the extraordinary results which may be produced by the slight, yet continuous, pressure of a simple elastic thread. He was called to see a girl about

eleven years of age, who was suffering from acute and severe, but somewhat anomalous brain-symptoms. The case was altogether obscure; the girl seemed in other respects healthy, but could give no account of herself—she was, in fact, at the point of death—nor could any satisfactory history be obtained from her friends. The attack soon proved fatal, and Professor Dittel made a necropsy. It was then found that the India-rubber band of the hair-net which she was wearing had ulcerated through the whole thickness of the calvarium, and had set up meningitis. On further inquiry, it was ascertained that the girl, having been constantly scolded by her stepmother on account of the untidy state of her hair, had, about three weeks before her illness, purchased an ordinary hair-net, and the elastic thread of this net, tied around the head, and worn day and night, had, in less than a month, cut through skin and bone and penetrated to the brain; and this apparently without causing any pain to the patient.

Professor Dittel at once proceeded to reduce to practice the idea suggested to him by this unfortunate accident. He first applied it to a case of nævus of the scalp on a child; then, finding that the plan quite answered his expectations, he applied it to the removal of the testicle, penis, etc., and finally to the amputation of limbs. He has now performed, by means of the elastic ligature, a large number of operations of all kinds, including five amputations of limbs. It is not understood, however, that he proposes to apply his method to the performance of the larger amputations; these cases were done rather with the view of testing the capabilities of the process. The time required for the completion of an operation varies according to the amount and density of the tissues which have to be divided; *e. g.*, for the separation of the mamma from eight to twelve days.

The chief advantage which Dr. Dittel asserts this plan to possess is, that patients so operated on are less liable to pyæmia than those treated in the ordinary way. He bases this assertion on the experience of the numerous cases referred to above.

Remembering also what a morbid dread of the knife many nervous patients have, the depressing mental effects of an operation may often be greatly diminished. Lastly, the operation itself is absolutely bloodless.

Among the operations for which it is admirably adapted may be especially mentioned *fistula in ano*, which Dr. Dittel now invariably treats in this way. One end of the India-rubber thread is passed in the eye of a probe up the sinus into the bowel, then caught, brought out at the anus, and tied; it cuts out in a few days.

The patient on whom Sir Henry Thompson operated was a stout, middle-aged woman, who was suffering from an ulcerating fibro-cystic tumor (cystic sarcoma) of the right breast. She had had a lump in the breast for twenty years, but it caused her little inconvenience till two years ago, when it began to enlarge rapidly, and finally the skin over it gave way. At the time of the operation the tumor was of the size of a large orange, and somewhat pendulous, the breast itself being wasted; it was crowned by a large, sloughy, fungating ulcer. The ligature used was rubber, about one-twelfth of an inch in diameter, the calibre of the tube about one-third of this. A large nævus needle was threaded with this and with a piece of twine (the use of which was explained afterwards) and passed under the base of the tumor; the elastic was then cut, the needle withdrawn, and the halves of the pedicle tied separately.

Sir Henry Thompson remarked, after the operation, that, although this was a very suitable case for the method adopted, it was not a severe test. The only accident that could happen was the snapping of the elastic when stretched; in that case, another length was tied to the twine, which had been passed under the tumor with the elastic and drawn by it along the track of the needle; otherwise, the twine was removed as soon as the ligatures had been properly tied. The best way to avoid the occurrence of this accident was always to use freshly-prepared elastic; if kept only a month, it was very liable to become brittle.

The skin over the tumor should be tightened just before tying, so that as little as possible might be included. Sir Henry added that, as that was the first time he had operated by that method, he had been anxious to conform in all respects to the practice of Dr. Dittel; but he thought that, another time, he should be disposed to make a superficial incision through the skin along the course of the ligature, so that it would be in a groove, and would not be liable to slip. He thought, also, that this would obviate the pain which Dr. Dittel said that patients sometimes experienced during the first two or three hours after the operation; in most cases, however, the pain was slight. This patient complained of pain, apparently not very severe, for about twenty minutes after she recovered from the chloroform. Dr. Dittel's paper in the "Allegemeine Weiner Medizinische Zeitug," 1873, has furnished very full details respecting this mode of treatment.—*British Med. Jour.*

ART. II.—"CRUMBS OF COMFORT" ON THE USE OF CALOMEL IN FUNCTIONAL HEPATIC DISEASES. By DR. H. C. WOOD. Philadelphia, Pa.

Physicians are divided into two schools on this subject; one saying that calomel has no effect on the liver, the other saying that it has. Those of the latter opinion are certainly in the majority, and embrace in their number by far the greater bulk of the active practitioners. Those who deny the action of mercury on the liver found their opinion upon experiments on animals; but, though much of our advance in therapeutics has been derived from this source, it can not overthrow well-observed clinical facts.

Bennett, Gamgee, and others of the so-called "Edinburgh Committee" performed the experiments by making biliary fistulæ and giving calomel and other drugs. They found that calomel in small doses had no effect; in doses large enough to cause depression and other symptoms the amount of bile was

diminished. But these experiments are unfair, because under abnormal conditions; and this alone would invalidate them.

Röhrig, a celebrated German author, opened dogs along the linea alba, drew out and opened the gall-bladder, and observed the secretion, which was kept up for several hours. To dogs about to be opened he gave calomel, with the result of greatly increasing the flow of bile. But I think that all these experiments should be cast aside. The only evidence to be relied upon is clinical.

Any of you may take from ten to twenty grains of calomel, and your stools will become green. Some say that this green color is due to the formation of a sulphuret of mercury. I am not aware, however, that this has even been proven for a single stool; and the question is not, Does *any* green calomel-stool contain mercury? but, Do not *all* such stools? The evidence is most positive that many of the green stools of mercurial purgation contain no mercury in any form. Thus, Simon analyzed such fæces, and found biliverdin and the other normal constituents of the bile, but no mercury; and Golding Bird and Michea did the same, with much the same result. Now, to find mercury is a very simple chemical problem, and it is impossible that the metal should have been overlooked by such eminent chemists as those mentioned, especially by Simon, a prince among organic chemists.

By some it has been thought that mercury simply caused bilious stools by increasing peristaltic action and sweeping out of the small intestines the bile naturally there present. I can not believe this; it is notorious that resinous purgatives—drastics, far more purgative than calomel—do not produce "bilious stools." The clinical observation of every day has been confirmed by the chemical researches of Michea, and is enough of itself to indicate that calomel increases the secretion of bile. But still more cogent reasons are manifold for believing in the hepatic action of the drug. It is not rare to find persons whose livers are especially sensitive to the action of mercury; and in these I have known a moderate dose of the drug to cause not

merely violent bilious diarrhœa, but also the vomiting of large quantities of nearly pure bile.

Moreover, the history of disease and of its treatment seems to me to prove indisputably the truth of the view I am advocating.

It is a well-known fact, that in jaundice from obstruction the stools are almost white; and it has been over and over again experimentally proven, that if in animals the bile be shut off from the intestines the stools lose their color.

You will often hereafter meet with cases in which slate-colored stools are passed, either with diarrhœa or constipation. This want of color is no doubt due to a want of bile in the alimentary canal, to a torpidity or absence of the functional activity in the liver. If you give calomel to such a patient, you will find that the passages become black, or even green; and this may occur without any increase in the diarrhœa.

Many cases of serous diarrhœa, which have been treated indefinitely with astringents, etc., will be promptly cured by the exhibition of calomel.

To illustrate these points, I bring before you to-day these two men. I wish you distinctly to understand that the example I am about to give, although a striking one, is by no means a rare one; but the results mirror those which have been witnessed hundreds of times and which I myself have seen over and over again. The first patient entered the hospital four weeks ago; he then had ten to twelve liquid, colorless, slaty, painful stools daily; there was no vomiting. He was given at intervals opium, bismuth, acetate of lead, tannic acid, and nitrate of silver, and his diet was regulated *secundem artem*. Under this treatment he improved very slowly, and continued to have liquid stools and to be utterly devoid of appetite for nearly three weeks, when the color of his passages gradually changed, and he is now just fairly convalescent.

This second man was admitted at the same time, from the same locality, and with exactly similar symptoms. For ten days he had similar treatment, without decided improvement.

The astringents were then stopped, and he was put on blue mass, grs. ix., daily, in three doses; in two days the stools were firmer, much less frequent, and, what is more important, their color was changed; on the third day the man was well.

The symptoms in the two cases were exactly similar; the disease had originated under precisely similar circumstances and causes; both patients being paupers in the out-wards, doing the same work, or rather enjoying the same idleness, eating at the same table, and having similar constitutions and similar past histories; yet one required three weeks of treatment without a mercurial, and the other, after pursuing a similar course as its fellow for ten days under the same treatment, is arrested in in twenty-four hours by calomel *without* astringents.

The cases, gentlemen, are very strong in their contrast, but, I repeat, are not solitary ones, but examples of what I have seen over and over again. Diarrhœas, apparently trivial, resist treatment until you give calomel. Sometimes the mercurial suffices; often, however, after the biliary secretion has been started, it is necessary to use for a day or two bismuth and acetate of lead, or other astringents. The practical bearing of these remarks is, that you should always inspect the stools, and, if they indicate the absence of bile, calomel should be given unless especially contra-indicated.

You will find sometimes that slate-colored stools and digestive disturbance coëxist with constipation; and under these circumstances a mild mercurial course is often of great benefit. Again, sometimes green stools in adults replace the slate-colored passages of the diarrhœa of which we have been speaking; in such cases there is often excessive pain, especially if the diarrhœa has been stopped. Under these circumstances I have never found anything but a mercurial to act efficiently.—*Philadelphia Med. Times.*

Ergot in Epistaxis.—Dr. Andrew H. Smith reports the case of a man, aged thirty-seven, who suffered from persistent epistaxis, recurring sometimes two or three times a day. Direct

and rhinoscopic examination showed no abnormal condition of the nasal mucous membrane. Astringents were applied locally by means of both the brush and syringe, and such general treatment was resorted to as the symptoms demanded. After this had been persevered in for two weeks without affecting the hæmorrhages, the fluid extract of ergot was prescribed in twenty-drop doses three times a day.

This was continued for ten days, with the effect of entirely restraining the bleeding from the time the first dose was taken. The medicine was then omitted, but in a few days the bleeding began anew. It was immediately arrested by a resort to the drug, and did not afterwards return; the medicine being continued at gradually-increasing intervals for nearly a month.—*Med. Record.*

Then and Now.—"Formerly, the great aim of the surgeon was to accomplish his awful but necessary duty to his agonized patient as rapidly as possible, and a clinical clerk, with a watch, always stood by to note the time so occupied. Mr. Herbert Mayo performed amputation at the hip-joint in ninety seconds. Mr. Edward Hutton amputated the middle of the thigh in seventy-eight seconds; and I have heard Jobert de Lamballe pronounce, not very slowly, the words, *un, deux, trois,* while he, with lightning speed, removed an arm at the shoulder. We have changed all this. We operate, like the sculptor, upon an insensible mass; we go carefully through our work, and, although accomplishing it as quickly as we can, we do not count the seconds."—*Prof. Quinlan, in Med. Times and Gazette.*

Extirpation of Kidney.—Dr. Brandt, Professor of Surgery in Klausenburg, has placed on record in the "Wien Medicinische Wöchenschrift," a case in which removal of the sound kidney took place in the human subject. A healthy man, aged thirty-five, was stabbed with a bread-knife in the left hypochondrium. Hæmorrhage to the amount of three or four ounces followed; and, about three hours after the accident, a

fleshy-looking tumor was expelled through the wound by a fit of coughing attended with severe pain. It was replaced by a by-stander, but was soon again driven out by the cough. On his admission into hospital, twenty-four hours after the injury, Dr. Brandt, after a careful examination of the protrusion (of which a careful description is given), arrived at the conclusion that it was the left kidney. Its surface, with the ureter, was torn in some parts, and allowed the escape of a fluid, at first yellowish and transparent, but afterwards sometimes reddish and sometimes turbid yellow. It had an alkaline reäction, a specific gravity of 1.042 to 1.052, contained in a large quantity of albumen and mucin, with some hæmaglobin, traces of urea, and an abundance of alkalies and alkaline earths. It gave a sediment, which on microscopic examination was found to consist of pus and blood-corpuscles, masses of nuclei, mucus-fibrils, and fibrinous clots; also epithelium of the kind belonging to the calyces and pelvis of the kidneys. Dr. Brandt arrived at the conclusion that the organ was rendered useless, that its retention endangered life, and that it would be best to remove it. The previous history of the patient did not contra-indicate this; he had had no severe illness, and though the urine in the bladder contained some albumen, this might be derived from the injured organ. Accordingly, on the fourth day of the injury—photograph of the patient having been first taken—Dr. Brandt tied the pedicle of the tumor in two parts, by means of a ligature passed through the middle, and cut it away with a knife. This operation was done on June 7, and on the 23d the patient left the hospital convalescent. No symptoms of uræmia or of peritonitis occurred during the progress of the case. The amount of urine excreted was measured daily up to the 22d. The quantities were the following: June 7th (half-day), 310 grammes; 8th (whole day), 923 grammes; 9th, 905; 10th, 1425; 11th, 1211; 12th, 922; 13th, 1278; 14th, 1222; 15th, 1548; 16th, 1306; 17th, 1296; 18th, 1324; 19th, 1312; 20th, 1437; 21st, 1498; 22d, 1513 grammes. The urine was throughout acid, of specific gravity, 1.010 to 1.040, and of normal

composition: at first it was of a reddish-yellow color, but afterwards became clear yellow. Dr. Brandt has seen the man several times since the operation. He has no signs of disease of the heart, but complains of a sense of oppression and fatigue, especially in going up stairs, and says that he can not work as well as before. Dr. Brandt, however, suspects that he may say this to avoid military service.—*British Medical Journal.*

Artificial Butter.—This new commodity, manufactured from beef-suet, having met with an extensive sale in London and Paris, is now being introduced by M. Paraf into the markets of New York and Boston. We must admit that the single specimen seen by us had both the appearance and taste of ordinary firkin butter. This butter is made from the yellow, tasteless, and colorless oil that is obtained from beef-suet. This oil is placed in churns, with one-fifth its weight of sour milk, and churned until an emulsion is formed, annotto being added to give it the required color. It is then cooled, and worked, and salted like common butter.—*Boston Med. and Surg. Jour.*

Vaccination from a Variolous Patient without Communicating Small-Pox.—During an epidemic of small-pox in a small town, a boy, fourteen years of age, was vaccinated; the arm took well, and about a dozen persons were revaccinated from it. On the thirteenth day the boy went to bed with an attack of confluent small-pox; was very ill for a week, and then rapidly recovered. No variola was communicated in any of the other cases, and all the arms took well.—*British Med. Jour.*

A Safe Method of Introducing Premature Labor.—Under this caption Dr. B. R. Morris ("British Medical Journal," Sept. 6, 1873) speaks of the great success he has had with electricity. A metallic sound, covered, except at the point, with a non-conducting substance, is inserted within the os uteri, while the other pole is placed upon the abdomen; they are then connected with the battery, and a slight continuous current passed through

the uterus for ten minutes. This process is repeated several times, and is invariably followed by delivery in two or three days. Gaiffe's small pocket battery is the most convenient instrument for this purpose.—*Exchange.*

Hypogastric Lithotomy.—Supra-pubic lithotomy has, in certain cases, a decided advantage over the lateral operation. Mr. Sampson Gamgee reports the case of a little girl, aged nine, pale, puny, and with a very narrow pelvic outlet, who had long suffered from the presence of a large calculus in her bladder. The size and fixity of the stone, together with the smallness of the outlet, induced him to operate by the hypogastric method. The calculus was extracted, and the wound healed directly. There was no constitutional disturbance, and the patient was discharged, cured, on the fourteenth day.—*Lancet.*

CLINICAL RECORDS.

"Ex principiis, nascitur probabilitas: ex factis, vero veritas."

CLINICAL LECTURE ON THE USE OF EARTH AS A DRESSING IN SEVERE BURNS. By ADDINELL HEWSON, M. D., one of the Attending Surgeons to the Pennsylvania Hospital.

Gentlemen,—Although I have already occupied a considerable portion of the time during which you have been attending my clinics in the exhibition and the discussion of the advantages of earth dressings for various conditions, I do not know that it is necessary for me to apologize to you for my intention to occupy a whole hour to-day in the consideration of the use of earth in severe burns. For, in the first place, the very special interest which you have displayed in the cases exhibited under such treatment heretofore is certainly sufficient to justify me in the idea that you are not weary of seeing them, and, in the second place, it is only in my wards that such dressings are used, and I wish, therefore, to give you every facility of seeing

them and judging for yourselves of their true value. Furthermore, the very class of cases to which I wish specially to direct your attention to-day, as to the advantages of the earth dressings, is unfortunately terribly on the increase: I refer to burns of the third and fourth degrees, according to Dupuytren's classification—that is, burns which, involving a greater portion of the thickness of the skin, are certainly the most painful of all such casualties. These, of late years, have increased at an enormous rate, owing, it would seem, to the very general use which is made of coal oil by the humbler classes as a means of light. This oil produces, when burning on the body, a much deeper destruction than follows the burning of camphene, which was formerly used. The latter is far less tenacious, and very volatile, and therefore usually produces a burn of the first or second degree; whereas you seldom see an injury from burning of coal oil in which there is not destruction to a much greater depth. I am confident that if our records in this hospital were sufficiently definite, this point could be demonstrated beyond all doubt. As it is, they furnish strong presumptive evidence in support of this view. A few years ago I was strongly impressed with the idea that the character of burns *then* admitted to this hospital was much more severe than it was when I first became familiar with its wards, nearly twenty-five years ago; and examining our books of admissions and discharges, I ascertained two facts which, I think, may be fairly taken as confirmatory of that impression. These are, first, the great increase of mortality from "burns" there recorded as having occurred in this hospital in the last fifteen years—that is, since coal oil came into general use—over what occurred in the fifteen years previous, the difference being actually such as to double the mortality; and secondly, the increased mortality in the last fifteen years was confined essentially to women and children. The first fact, I would argue, indicates an increased seriousness in the character of such injuries; and the second, that the increase has been in the class most liable to casualties at home. Furthermore, the difference between the periods is well defined.

Up to the time at which we can fix the introduction of coal oil into use in Philadelphia, the mortality in this hospital from "burns" had been each year about the same, whereas, since then, it has, up to within four years, steadily increased. We have then, so far as I can see, no other means of explaining these facts. The terrible character of the injuries inflicted by this article, when ignited, you will have a fair opportunity of witnessing in two of the cases which I shall present to your notice to-day. These two cases, having been subjected to the ordinary treatment during the greater part of their sojourn here, furnish us with some of the material for the contrast which I purpose making between such treatment and that with earth dressing. Before exhibiting them to you, I shall, however, bring forward a case which has been treated throughout with the earth.

CASE I.—Was admitted four weeks ago last evening. She is, as you see, a stout, hearty-looking woman. She weighed, at the time of the accident, over two hundred and twenty-five (actually 227) pounds. She was then cooking at a range, and, leaning over the fire, her hair fell down, and, reaching into the fire, ignited, and burnt her very severely, not only about the neck and face, but on both hands, forearms, and arms, and right breast. No doubt the greater part of the injury was caused by her endeavors to extinguish the fire in her hair. She was admitted to the hospital a few hours after the accident. The burns on the head involved the forehead, both cheeks as far forward as the malar prominences, the chin, lips, and ears. These burns were of the first, second, and (in some places) third degrees. The whole of the hand, two-thirds of the flexor surface of the forearm, and two spots of about two inches in diameter on the arm of the left side, were burnt fully to the third degree. The dorsum of this forearm, and half of this arm, were all vesicated, constituting burns of the second degree. The injuries to the right upper extremity involved the hand (almost, but not quite, its whole surface) to the third degree; the thumb, index, and little finger, to the fourth degree; more than half

the circumference of the forearm, towards the inner side, and its whole length, to the third and fourth degrees; and the inner surface of the arm, more than half its length, to the same depth. There was also a burn on the right breast, evidently a deep one, and one on the shoulder of that side. The burns on the neck involved, within three inches, its whole circumference and its whole length, and varied in degrees from the first to the fourth.

The earth was applied immediately after the patient's admission. On the face, forehead, and ear it was applied as a powder or a paste, and allowed to dry without any covering to retain it in situ. The scabs or crusts so formed were never disturbed, and fell off of their own accord within the first two weeks, leaving no trace, in the form of cicatricial tissue, of the injury which had been received. You can see, on close inspection, three different tints of redness in the face, indicative of the three different degrees of burning which the parts there had sustained. Those of you who are near enough can, by feeling, satisfy yourselves that there is not a trace of cicatricial tissue to be found there. The skin now covering the points which were burnt is as soft and pliable as that on any other part of the body.

The patient's arms, forearms, hands, breast, shoulder, and neck were dressed with the clayey earth, spread in the condition of a thick paste on strips of bandage, and so applied after the method of Scultetus, the burnt surface having been previously dusted with the powdered earth. This dressing was then covered with plain blue tissue paper, and all retained by spiral bandaging.

On the following morning, when I saw her for the first time, she expressed herself as being free from pain in the burnt surfaces, except at a number of points where, as before mentioned, the injury sustained was of the first and second degrees; and I at once surmised, from past experience in these cases, the cause of the pain—namely, the vesications which had formed since the dressing was put on. The removal of the dressings

proved this to be the case, for in every instance where she designated the seat of this special pain we found a large bleb filled with *coagulated* lymph. These blisters I opened freely, and covered with the dry powdered clay, which instantly removed the burning pain. The dressing was then reäpplied, and the patient expressed herself most emphatically as entirely free from pain.

On the next morning, however, she had a good deal of complaint to make, and urged me to apply "linseed oil and lime-water," as it would cause her less pain, and heal her burns up at once. I was confident, from this circumstance, that she had been tampered with. The removal of the dressings showed that the sloughs were beginning to separate; and in some places the hard crust of the earth and dead tissues could be seen to occasion her acute pain as it was drawn off without previous moistening. I therefore used water for the first time; and washing off the balance of the dressing, made it quite evident that her sufferings were from the dressings having got too dry. Consequently, when I put them on again, that morning, I used waxed blue paper on both extremities as an envelope, in place of the plain paper.

The next morning she stated that she had been entirely free from pain, and admitted that her complaints the day before were exaggerated, and had arisen from some one telling her that I was not using the best dressing for her condition. On opening the dressings this morning, there was distinctly perceptible that peculiar odor which you have often had the opportunity of noticing where the earth has been twenty or more hours in contact with sloughing tissue. It resembles more the odor of *salt marshes* than anything else I know of. It is due to the earth becoming saturated with the *elements* of the disintegrating tissues, and is the only odor ever perceptible where the earth dressings are used, and then only when the earth is quite saturated with the discharges.

The covering with waxed blue paper was continued until the tenth day, when all the sloughing and dead tissue had come away.

Up to the fifteenth day the discharges from the right arm were always sufficient to penetrate the dressings in the course of the twenty-four hours. On that day it was noted for the first time that no discharge had escaped through the dressings, and measurements across the ulcerated surface at its widest points—one and one-half inches above the styloid at the wrist, and two inches below the bend of the elbow—were respectively two and one-fourth and two and one-half *inches less* than they were the day before. The limb was washed on these mornings only on purpose to take these measurements with accuracy.

Two days later, although some discharge had penetrated through the dressings of this same arm—which you will remember was the worse injured—it was noted that "a band of healthy skin one and one-half inches wide had formed across the wrist." The earth was picked and washed cleanly off to make this perfectly evident, before the measurements were made.

With the left upper extremity we had even more rapid progress; the sloughs not only separated very promptly, but the ulcerated surfaces left by their separation on the eighth day (after the injury was inflicted) were then thoroughly dusted with the dry earth which crusted on them, and remained there perfectly dry, except at four minute points, until the eighteenth day (April 2), when I washed the limb for the first time since the eighth day, and revealed the surfaces completely healed, and covered by healthy skin, with the exception of three small points between the fingers, and a small ulcer, the size of a half-dollar, at the wrist. The earth dressings were reäpplied to these points for two days longer, and on their removal then, it was found that the whole of the extremity was healed. The progress in the right limb continued steadily; and, that you may judge of its rapidity, I will read to you the note of yesterday: "A bridge of skin has now (i. e. within twenty-four hours) formed across the ulcer at the head of the elbow, leaving a granulating surface on the forearm four inches long." Now look at the size of that ulcer; it is but little over two

inches in length, and by the same rate of progress will be entirely covered in the next twenty-four hours. These two ulcers on this limb, the one on the breast, and the one on the shoulder —all about the same size—constitute all that is left of the original injury, which you must remember was inflicted on this woman only twenty-eight days ago last night.

The result in this case is one of the most satisfactory, if not the most extraordinary, that it is possible to conceive of. Her burns, most of them, of the third and fourth degrees, which, as a rule, heal with ugly cicatrices, maiming, and disfiguring the patient for life, have healed by the most satisfactory of all reparative processes where there has been loss of tissue—viz., by "*scabbing.*" Her face, neck, and left upper extremity present the most perfect specimen of this mode of healing it has ever been my fortune to witness. On many parts of the left limb you can observe (as also on the right) the *scabs* which have formed by the clay; and as I peel these scabs off, you can see the new skin beneath, perfectly soft, pliable, and entirely free from all trace of nodular tissue. It is as thin as the skin in any other part of the body.

While on this point, I will read to you from "Holmes' Surgery" what Mr. James Paget says on this mode of healing—and he is the highest of all authorities:

"*Healing by scabbing*, or under a scab, is the most natural and, in some cases, the best of all the healing processes. Very commonly in animals, if a wound be left wide open, the blood and other exudations from it dry on its surface, and, entangling dust and other foreign bodies, form an air-tight and adhering covering under which scabbing takes place, and which is cast off when the healing is complete. The exact nature of the process has not been watched; but it seems to consist in little more than the formation of cuticle on the wounded surface; and it has the advantage that, as no granulations are produced, there is little or no contraction of the scar. In man the same process is less frequent; it is more apt to be spoiled by inflammation, producing exudations under the scab, which either detach

it or prevent the healing of the surface beneath it. Sometimes, however, the blood shed from a wound coägulates and dries on it, and, remaining as a scab, permits healing under it; or, if this do not happen, a similarly effective scab may be formed by the serous fluid or lymph, by which the surface of an exposed wound usually becomes glazed; or, more rarely, the pus of a granulating wound may scab over, and sound healing take place beneath."—*Holmes Surgery*, vol. 1, p. 587.

Those of you who have been constant in attendance on my clinics can certify to the accuracy and clearness of all that has been said by this eminent authority, with possibly one exception—namely, his statement that, "as no granulations are produced, there is little or no contraction of the scar," which would seem to intimate that a granulating surface must always, even when healing under a scab, result in a contracted scar. The case before you flatly and positively disproves such an idea. For we have, on the face, neck, and the whole left upper extremity, the most convincing proof that although these surfaces were, twenty days ago, in a granulating condition, not the slightest trace of a contracted scar is to be found there to-day.

This patient, I freely admit, has had everything in favor of a good result, so far as her general condition is concerned. She was at the time of the accident in the enjoyment of the best of health, and in the most admirable state of nutrition. But those of you who visit the wards with me, and saw her the morning after her admission, know that she sustained a terrible injury, of which she even now presents sufficient evidences.

To prove to you that similar results, although of course not so perfect, can be obtained in patients in quite an opposite state as to general health, I will show you another case:

CASE II.—This patient is thin and emaciated to an extreme degree—with complexion, skin, hair, and teeth showing that her general condition must have been of the worst kind long before she met with her injury. She is a widowed woman, fifty-four years of age. Lost three children in their infancy, and has two living.

On the evening of the 26th of January (eleven weeks ago to-morrow) she stumbled and fell whilst descending a flight of kitchen stairs with a lighted coal-oil lamp in her right hand. The contents of the lamp, in an ignited state, ran over the right upper extremity, shoulder, side of chest, neck, face, and head, destroying most completely the integument (to the third and fourth degrees) from about two inches above the wrist to the crown of the head. The hand was badly burnt, but most of it only to the second degree. Her left hand was also burnt to the same (second) degree. She was immediately conveyed to the hospital, where her injuries were dressed by the resident physician of the ward with oxide of zinc ointment. This treatment I did not change when I took charge of the ward on the 1st of February. Under it both hands (burns of the second degree) were completely healed at the end of four weeks, and some cicatrization had in that time been effected along the margins of the burns on the head and neck and the lower margin of the burns of the forearm. In this interval of time powdered oxide of zinc was twice sprinkled over the denuded surface, but occasioned each time so much pain that its use was discontinued.

To my inquiries each morning as to how she felt, and was doing, I always got (during these four weeks) a most cheerful answer from the patient—that everything was doing well; and the answer was given in such a way that I fully understood that she did not want me to make any change in the treatment.

My resident, Dr. Gerhard, told me, however, at the end of this time that things were not making good progress, and, after a careful examination, during which it was quite evident the patient was very much afraid of me, I determined to continue the same treatment. This seemed to inspire the poor woman with a little more confidence. Shortly after this event, the patient whom I have just exhibited, was admitted into the same ward, and placed in a bed directly opposite to this one; and it afforded me no little amusement to observe the latter's intense interest in the earth treatment, and with each day's favorable

report of No. 1, this woman seemed less and less afraid of me, and she would give me a "God's blessing," or a God speed, each time I left the room. Then she began to be a little more communicative, and said the cerate gave her pain, a thing that she would not admit before. Finally she expressed a desire that I should do something more for her than was being done. Last Monday week (April 3), I determined to apply the earth to the forearm only, and so dispossess the patient's mind of the notion which had evidently been at one time very strongly impressed there, that such a dressing would not suit her case, and which still had some footing, for she murmured something about not being strong enough to bear it.

The following is the note taken of the condition of the ulcer on that day:

"There is a continuous ulcer involving the right side of the head and neck, the shoulder, as far down on the back as the spine of the scapula, the front of the right chest, involving the whole mamma, the side of the chest, axilla, the whole arm and forearm to within two inches of the wrist. The hand and these two inches of the forearm are covered with a scaly cuticle. There are two small islands of cuticle of about the size of a dime on the dorsum and ulnar side of the forearm. All this ulcerated surface has a pale, smooth, and glazed appearance, with distinct vessels distributed on it, and does not seem to have healed any in the last three weeks. The discharge is thin and serous in its character."

I then sprinkled the surface of the forearm and about two inches of the arm at the elbow with finely-sifted clay, and noticed with satisfaction the change of expression in my patient's face; it was that of positive relief from dread. Over this powder I applied the strips of bandage covered with wet clay, then the waxed blue paper and a spiral. To the rest of the burnt surface I had the cerate of oxide of zinc reäpplied as heretofore.

On the next morning the patient stated that she had been entirely free from pain in the parts covered by earth, but that

it still continued in the parts to which the cerate was applied. When I took the dressing off the forearm, it was found that one of the islands of cuticle, which the day before was of the size of a dime *only*, had increased so as actually to measure five *inches* in length by two and three-quarters in width, and extended from the olecranon down along the back to the forearm. There was also a good-sized spot, over one and a half inches in diameter, well covered with skin, on the back of the arm. The granulations over the rest of the surface which had been covered by the earth had evidently become more healthy, as could be seen by contrast with the part which had been covered by the cerate. The discharge was also thicker, and much less in quantity.

On the next day it was noted that the skin formed on the back of the forearm had reached eight inches in length, and had increased considerably in width. The discharge was thicker and more abundant, and had kept the dressing thoroughly saturated. The patient complained of having had pain on the under surface since midnight. This I proved to have been caused by the dressing getting saturated and being kept so by the waxed paper; for that afternoon I removed the dressing to show the case to my distinguished friend Professor Gross, who did me the honor of coming to see some of the cases on which I had been using the earth dressings. In place of the waxed paper I applied the dressing with the plain blue paper, and the next morning everything was dry on the outside, and the patient had not had any pain whatever in the forearm.

You can now see what changes have occurred since then—that is, in the last six days. Here is the large island of skin —much increased in size—with all its conditions as perfect as though there had never been an injury there. Notice carefully the characters of the skin which has been formed here: they are precisely like those of the skin of her other arm, which was never injured, save in the color. Contrast also the surface not yet healed, and which has been under the influence

of the earth for nearly ten days, with those of the parts where the cerate has been constantly applied, and you can see a very great difference. As I peel off with the forceps a cake of the earth here on the back of the forearm, you will notice that the surface is bedewed with a clear transparent fluid, like that on the surface where the cerate has been; but in a few seconds this fluid in the former place congeals, and gives us the idea that the parts there are actually healed, whereas in the latter it remains a thin serous fluid. It is thus evident to you that in the one place—where the earth has been—the fluid exuded is coägulated, whereas in the other it is not so. This, as you well know, is a very important difference. The relief that this poor old woman has had from the earth dressings have made her very importunate to have them applied all over her injury; and I have promised her that they should be to-day, after you have had the opportunity of contrasting the effects of the two kinds of dressings.

Now, I think I have proved to you by this case all that I promised—namely, that earth exerts a healing influence even where the general conditions of the patient are not the most favorable. I will now show you a case where the earth dressings have been applied to one set of burns, and the ordinary treatment to the other, both the result of one (and a similar) injury to different parts of the body. This case you will all remember my having exhibited here shortly after his admission.

CASE III.—This patient burned himself while drunk, by going into a rolling mill and falling on some iron which had just been removed from the rollers. The injuries which he thus sustained were four deep burns—one set of two on the left temple and side of face, and the other two on the forearm and hand of the right side. He was admitted to the hospital shortly after the accident on the afternoon of March, 28, and my resident, recognizing the fact that these four deep eschars had to be separated before any repair could take place, applied to them all yeast poultices. When I saw the case at my usual

hour of visiting the wards the next morning, at 7½ o'clock, I thought it was an excellent one for making a comparative trial of the earth dressing and of the ordinary treatment. I therefore selected for the former—the worse set—the burns on the head. These were—one involving all the temporal fossa, within half an inch of the ear, and the other an eschar or burn of the fourth degree, an inch in diameter, directly over the zygoma, and separated from the first by not more than an eighth of an inch of sound skin. The burn in the temporal fossa involved not only the skin through its whole thickness, but also the temporal fascia, and a considerable portion of the muscle beneath.

The burns on the extremity were, one just above the wrist, circular in form, and an inch and a half in diameter, and another of nearly the same shape, but half the size, over the dorsum of the carpus. The latter was evidently not of any greater depth than the lesser injury on the head, and the former seemed to go entirely through the subcutaneous cellular tissue. The two sets of burns were, therefore, relatively alike—although that which I selected for the earth treatment was clearly the worse, certainly the more extensive of the two.

When I showed the case before, you will remember, the patient was most emphatic in his declarations that the burns under the earth treatment did not give him any pain, whilst those under the poultice and cerate had constantly pained him. He has given us the same answer, of course, when blue wash and nitrate of silver were applied to the burns on the extremity, as it has been necessary to do recently, in order to destroy the flabbiness of the granulations there, and to hasten cicatrization. Now, what I wish specially to call your attention to, to-day, is the result. We can not very readily make any fair comparison as to the rapidity with which the healing has occurred in the two places—for there was originally four times as much to heal in the one place as there was in the other. But you can all see for yourselves the difference in the manner in which the healing has taken place. At the wrists the seats of the burns are

now occupied by well-defined and hard cicatricial tissue, which is easily isolated from the healthy tissue surrounding it; whereas on the temple you do not see a trace of anything of the kind. Here, between what were the centres of the two burns—and you will remember that their opposed borders were almost touching—we have now a surface of perfectly healthy skin of a deep pink hue, free from all induration or adhesion. I can pinch it up and move it freely. There is certainly no way of accounting for this difference on the score of locality. One part has been as much subjected to motion as the other. The patient has been using his hand and arm quite freely ever since the ulcers began to granulate; and the ulcer involving the temporal muscle, you can readily understand, has been subjected to the influence of motion every time he has opened his mouth. The advantages from the earth dressings are here most positively evident.

In illustration of the effect of earth dressings on the results of severe burns, I have yet to show you another case, which has occasioned a great deal of amazement among some of my medical friends who have been watching it:

CASE IV.—This patient was admitted on the 17th of December last, for severe burns of the right breast and of the inner sides of both lower extremities in the vicinity of the knee-joints. These burns were mostly all of the fourth degree. She was also burnt on the neck in the first and second degrees. The accident was the result of a child throwing a lighted match into a lamp which this woman was filling. When she came under my charge, on the 1st of February, the injuries were nearly all healed. There were some ulcerated spots around the margins of all the deeper burns; but the cicatrices were so contracted at the knees that the patient could not stand on her limbs. There were also the most positive evidences of keloid degeneration—the form of keloid which occasionally shows itself in cicatricial tissue. This is, strictly speaking, a hypertrophy of the fibrous element which enters into the structure of ordinary cicatrices. Such growths, we are told by Mr.

Paget, "rarely surpass half an inch in thickness or more than half an inch in any direction." In this case they had some time since attained nearly such a size, and had not changed any in the past month—up to last Thursday. My presumption was, therefore, that they had ceased to grow, and recalling the effect of the earth dressing on similar hypertrophies which I had seen, I determined to give it a trial here. The patient had then been over fifteen weeks in bed, in a helpless condition—for she could not move from where she was lying, except on her hands and knees or buttocks. I had directed constant resort to passive motion, to see what it would do to overcome the tendency to contraction; but further than that, I had not meddled with the treatment under which I found her.

On last Thursday I selected the right limb for the trial of the earth. My reason for doing so was that it was by far the worse of the two. The burn on this limb had originally extended from six inches below the knee to within an inch of the vulva—equal to sixteen inches in length—and involved at the knee two-thirds of the circumference of the limb: the injury to this limb was thus thrice as great as that which the left had sustained. The keloid degeneration was also very much worse; and so with the contraction of the knee, for it was such as to hold the limb bent at an angle of about 80 degrees, whereas the contraction of the left was not over 40 degrees from the straight line of the thigh—and it was quite evident that if she could only get this *right* limb sufficiently straight to sustain her weight, she would be able to move about with facility. Professor Gross, in his visit to the wards with me on Wednesday evening, saw this woman, and examined her with considerable interest. I did not inform him at the time of my intention to use the earth dressing in the case. When he saw her again, two days later, his surprise was very evident; she was then walking about the room, and expressed herself to him as very much relieved of the pains with which she had been annoyed prior to the earth being applied. There was, even at that early date in the use of the earth, a marked improvement in the appearance

of the surface of the cicatricial tissue. It was not only not so indurated as it had been, but it was less so than the cicatrix on the left knee. No blisters had formed on the portions occupied by the keloid, and the subjacent tissue was evidently freer. Pinching up the margins of this cicatrix, so as to embrace a thickness of the sound skin and one of cicatricial tissue between the finger and thumb, it was susceptible of demonstration, by contrasting it with a similar fold of sound skin alone, that the cicatrix was a quarter of an inch thicker than the sound skin.

Forty-eight hours later, this difference was reduced one-half; and to-day, six days only since the earth was first applied to this knee, you can see for yourselves by comparing the two knees that improvement has occurred. All the cicatricial tissue which has been covered by the earth has become soft and pliable, and presents in that respect alone a marked contrast to the portions which have been left uncovered. You can also perceive how much more readily she can use the limb, straightening it perfectly, and bearing her whole weight on it. This is a result unquestionably due to the earth dressing.—*The Medical Times.*

PROCEEDINGS OF SOCIETIES.

"Etsi non prosunt singula, juncta juvant."

REPORT OF A CASE OF ACUTE SPINAL MENINGITIS; WITH REMARKS. By WM. FORRESTER, M. D. [Read before the Medico-Chirurgical Society of Louisville, Ky.]

Mr. President,—I am desirous of reporting the following case, not that it furnishes anything new in regard to the nature and treatment of disease, but because it is the record of a disorder which, in my experience at least, is of sufficient rarity to merit some attention from this Society. It is of a disease so distressing in its symptoms, so violent and rapid in course, and

so frequently, if not uniformly, fatal, that it must be recognized early and treated vigorously from its onset to give the patient any chance of recovery.

Bridget S.; white; fifteen years old, came under my observation December 12, 1873, at 8 o'clock P. M. She is of nervous temperament and delicate constitution. She has, however, enjoyed fair general health. She has never menstruated, nor, so far as has been observed, has she ever suffered from any symptoms indicating that nature had attempted to establish that function.

The mother of the patient died four years ago, at the age of forty-eight years, of some disease accompanied by dropsy. Her father died four months ago of some disease presenting symptoms similar to those from which she is suffering, but of a chronic character, he having lingered eleven or twelve months. After her father's death, she suffered for some time from severe nervous depression.

On Sunday morning, December 7, 1873, this girl seemed to be in good health. During the afternoon of the same day, she, with some other girls, visited the City Hospital; while there she saw, in the post-mortem room, the body of a man upon which a post-mortem examination had been made, and smelled the odor of the room. This seems to have caused a profound nervous shock. In the evening, after returning home, she complained of loss of appetite and nausea, without vomiting, however. During that night she was restless, and frequently waked up out of frightful dreams.

On the 8th, she still complained of general malaise, nausea, and want of appetite. About noon on this day a violent fever came on, attended by pain in the back of the neck, along the whole course of the spine, and in the feet, with inability to walk. The fever continued through the afternoon and night, though at times there was profuse perspiration. All night she was wakeful and extremely restless, wishing every few minutes to change from one bed to another. She seemed to suffer from some undefined dread, and begged her stepmother to hold her

in her arms to keep her from moving about so much. The pains in the back of the neck, along the spine, etc., increased in severity, the jaws became stiff, and the lower extremities rigid, at least on attempts at movement, so that she could not walk, but would fall on making the effort, unless supported. The symptoms continuing to grow worse, a physician saw the patient on the evening of the 11th and morning of the 12th of December. He gave an unfavorable prognosis, and put her on what I believe was bromide of potash.

On the night of the 11th, her screams, on account of the pain, were so loud that they could be heard a considerable distance from the house. I saw her at 8 o'clock P. M. on the 12th of December. The attendants said she had slept none since the night of December 7th.

The condition of the patient is now distressing in the extreme. There is great restlessness and an anxious and painful expression of countenance. The mind is perfectly clear, and articulation unimpaired, though movement of the jaws in talking brings on spasm and distress. On attempts at *movement*, there still occur fits of pain along the spine, most severe in the cervical portion, over the sternum, of a pressing character, passing through to the spine, and in the lower extremities, particularly in the soles of the feet. The arms have been painful and rigid, but are now painless and capable of voluntary movement.

Along with the fits of pain produced by movement, there occur fits of muscular stiffness, which firmly close the jaws, forcibly extend the legs, render the chest walls rigid, the abdominal muscles tense, and arch the spinal column, causing opisthotonos to as great a degree as is seen in acute tetanus.

The intervals between the fits of pain and muscular stiffness are of short duration. The contractions last but a few moments, when the muscles become relaxed.

These muscular contractions seem to be, in part at least, voluntary; for, on the patient making a strong effort at control, I am enabled to separate the jaws an inch, and to flex the legs

upon the thighs. Any attempt at movement on her part, however, immediately brings on fits of pain and spasm.

Respiration is difficult and painful. The bronchial tubes contain much mucus, which, collecting in the throat, causes rattling, and in the mouth, from which the patient can not eject it. The attendants wipe away the frothy matter from between her teeth. There is frequent half-suppressed painful cough. Thirst seems to be almost insatiable, though but little fluid can be swallowed at a time. The tongue is clean, the appetite gone. Pulse 120, small and weak; temperature 102½; bowels constipated. Some urine passes now, though it has been very scant for several days. The skin is moist and perspiring, without any spots.

The patient is to be kept quiet in bed, if possible; to have fifteen grains of chloral hydrate every half hour until sleep is induced, or sixty grains taken, and milk in small quantity at short intervals.

December 13th, 9 *A. M.*—Patient slept some last night, as much as two hours at one time, after four doses of the chloral had been taken. The chloral now causes so much burning in the throat and such a sense of suffocation, that she can not continue it. Pulse 120, small, and weak; temperature 100. Very little nourishment is taken. The fits of pain and spasm are now more frequent and painful than last evening. She begs for something to relieve her sufferings. To have half-ounce doses of whiskey every two hours, signs of exhaustion being quite marked. 2 P. M.—No amelioration of symptoms. To have quarter-grain doses of sulphate of morphia every two hours. 8 P. M.—Patient rested easy some during the afternoon. Her pains are not quite so severe, though the fits of spasm recur often and produce as marked opisthotonos. Her mind is perfectly clear. Pulse 140, very weak. Exhaustion is more marked. Frothy mucus continues to collect in the mouth. She is still extremely restless, wishing to be constantly changed from back to side, or side to back, or to be propped up in bed, getting ease in no position, and too weak to move herself.

Every few moments she calls for water, either on account of insatiable thirst, or as a part of the general restlessness.

The girl died from *asthenia* at 10 P. M., Dec. 13, after an illness of six days, her mind continuing clear to the last, she having talked rationally with her attendants a few moments before death.

This was, in my opinion, a case of simple acute spinal meningitis. Its marked and characteristic features were extreme restlessness, fits of pain along the spine, in the extremities, etc., fits of muscular stiffness in the painful parts, nausea without vomiting, absence of headache, absence of cerebral symptoms and spinal tenderness, absence of spots on the skin, and death by asthenia.

The etiology of the case is obscure. Whether the nervous shock to a constitution, hereditarily predisposed to neurotic disease, was sufficient to induce the attack, I am not able to say. Her hygienic surroundings, which were bad, she having lived in a badly-ventilated room, whose floor was lower than the surrounding surface, may have had something to do with its causation. The non-establishment of the menstrual function deserves some consideration in this connection; as I think that is oftener the cause of fatal mischief than is generally believed.

In the diagnosis there are several diseases from which acute spinal meningitis must be distinguished. These are hysteria, myelitis, spinal congestion, tetanus, spinal irritation, and epidemic cerebro-spinal meningitis (fever?)

In the early period of acute spinal meningitis, I do not know whether its symptoms are enough like those of *hysteria* to be a cause of doubt; certainly in the later period, no mistake could be made after a careful examination of the case. There is predominance of emotion over the will, no causeless tears or laughter, no copious flow of limpid urine, and no irregular muscular contractions.

In *myelitis* there are tingling, ushering in of paraplegic anæsthesia and paraplegic paralysis, a disagreeable feeling of tight-

ness as of a cord passing around the waist or elsewhere, generally corresponding to the site of the inflammatory change in the spinal cord, absence of spasmodic symptoms, want of control over the bladder and rectum, altered sensibility to heat and cold over the seat of lesion, and annihilation of reflex-excitability, none of which symptoms are found in acute spinal meningitis.

In *spinal congestion* we find incomplete paralysis in a paraplegic form, with tingling in the tips of the fingers and toes of the paralyzed limbs, no exaggeration of reflex-excitability and pains in the back and limbs, which are *not increased by movement.*

In *tetanus* there is permanent muscular rigidity, implicating at its height almost all the muscles of the body, except those of the hands, eyeballs, and tongue, pain at the pit of the stomach, piercing through to the back, increased reflex-excitability, heat of skin, comparative voicelessness, a bitten tongue or cheek, dilatation of pupil, presence of a wound and death by *apnœa.*

In *spinal irritation* we find tenderness in different parts of the spine, a nervous constitution, variability and inconstancy of symptoms, prolonged muscular contractions, various nervous pains; nausea, retching, vomiting, eructation; spasmodic cough, difficulty of breathing; palpitation; irritability of the bladder, etc.; each of these groups of symptoms being generally connected with tenderness in a particular part of the spine.

In *epidemic cerebro-spinal meningitis*, headache, usually violent, and enteralgia are almost constant symptoms, delirium is rarely absent, there is increased sensitiveness of the surface of the body, spasm, paralysis, vertigo, coma and stupor, uncontrollable vomiting, sighing, labored or interrupted respiration, spots of various character usually seen on the skin, temperature elevated, according to some writers high, with no difference between the morning and evening temperature.

The prognosis in acute spinal meningitis must always be grave.

Nothing in the way of curative treatment was attempted in

this case, as I believed that disorganization of tissue had occurred to such a degree as to render all curative efforts futile. Had I seen and recognized the case early, I should have had leeches applied along the spine, followed by ice-bags; at the same time giving calomel and opium internally. Possibly some service might have been rendered by remedies calculated to diminish the capillary vessels of the spinal meninges, such as ergot or belladonna.

ORIGINAL CORRESPONDENCE.

"Sit mihi Fas scribere audita."

ELK CREEK, SPENCER CO., KY., March 4, '74.

Dr. Gaillard:

Dear Sir,—I send you for such use as you may deem proper to make of them some facts in regard to my plan of treating diphtheria. I say my plan, because I had never heard or read of the local application of dry calomel to the parts.

In the year 1865, I had under treatment quite a number of cases of diphtheria (it was epidemic that year). I found the usual treatment unsuccessful, and having some fifteen cases in one tenement-house, one of which had expelled, in an attempt to cough and vomit, the entire lining membrane of the œsophagus for the space of some five or six inches, in perfect tubular form, leaving the parts raw and bleeding. Knowing the good effects of calomel upon ill-conditioned sores, I concluded to try it upon the denuded surface, and did so by means of a small cane-tube or quill (either will do), introducing the calomel into the tube, about ten grains, and then inserting the tube into the mouth, blow the calomel, with some force, into the fauces and throat. In the remaining cases I mopped their throats with turpentine, so as to cleanse the parts and permit the calomel to come in direct contact with the inflamed parts, and then ap-

plied the calomel as in the first case or patient. These applications I repeated twice each day until the diseased surfaces took on healthy action. The result was recovery in all of these cases; and in less than twelve months I treated eighty-three cases of the disease without the loss of one.

Before I resorted to this treatment, I was unsuccessful, as were all of my brethren in the Profession. The epidemic of 1865-6 was quite fatal. I have never known this treatment to fail, except when the disease had entered the windpipe, constituting diphtheritic croup; and I believe that the calomel would cure even diphtheritic croup if it could be applied to the parts.

Of the eighty-three cases treated by me, only two were *purged* by the calomel applied as above stated.

I have never had this treatment published, from the fact that I have an indisposition to notoriety.

Yours truly, OTHO MILLER, M. D.

WHITE HALL, POINSETT CO., ARK., March 13, '74.

Dr. E. S. Gaillard:

Dear Sir,—I am aware that your time is valuable, nevertheless, I feel that I may beg your indulgence while I relate a strange case (to me at least); for I have never seen or read of such a one. It is a case of uterine entozoa. The lady subject is about twenty-six years of age; married a little more than two years; who, from the earliest appearance of the catemenia, has been irregular, suffering greatly at times from dysmenorrhœa and also with leucorrhœa. There has been suppression of the menses since Christmas up to a few days ago, when, from attending a dancing party, going on horseback, and dancing a set or two, had, the next day, slight sanguineous discharges with the pains characterizing menstruation. Pregnancy has been suspected, and, of course, there was some anxiety with regard to the case. In a short time afterwards, however, she expelled two or more pretty large and firm masses (coägula I suppose), which the lady compared to "pieces of liver." Being endowed with the medium stock of curiosity pertaining to

the sex, she at once became interested, and with a piece of wood broke up the masses, and says in it she "found a small white worm of the size of a large sewing needle and about two inches long, very active and lively." I should state that since about the last of December she has suffered greatly with pain about the region of the left ovarium.

Now, Doctor, I write this in hopes of hearing from yourself, or some of your numerous subscribers, whether it be an anomalous case. I confess that I have not, in a practice of some forty years, and in all my reading, come across such a one. The question is, how and by what route it found its way to the cavity of the womb? Could it have been self-existent? You may, perhaps, be familiar with such curiosities, and any suggestions you make will be thankfully received.

Yours, etc., J. A. Jelks, M. D.

Eufaula, Ala., March 1, 1874.

Dr. E. S. Gaillard:

Dear Sir,—Every surgeon of experience knows how readily wounds of the face heal and what satisfactory results are obtained in the management of such injuries, even where lacerated and badly contused. My object, therefore, is not to report the following case because of its nature, treatment, or result, but because it involves a discovery which I desire to place upon record. I need not remind you, however, that such desire is no evidence of the value or importance of a discovery.

Orthodox people, especially the patient and the pious, believe that all of Nature's uniform provisions are for good; but I venture to say, that no mortal Caucasian, whether pious or impious, level-headed or visionary, ever expected or hoped, either by plodding investigation or flighty imagination, to ascertain what possible good purpose is subserved by the prodigality lavished by Nature upon the African's lips.

This good purpose I discovered in my office a short time ago, under the following circumstances: Our famed omnibus-man, Jerry, brought in and desired that I would "fix up" a colored

brother who was holding a bloody towel over the lower portion of a very sad and tearful countenance.

The history of the case showed that the man had been incautiously leaning over Jerry's front fence. I omitted to inquire whether the colored fellow-citizen was in a pouting humor at the time; but, at all events, it appeared that Jerry's yard-dog was *not* in an amiable mood, and that sneaking, unseen, along the line of fence, he leaped savagely at the negro's face. Of course the most prominent features especially suffered, and the result was an exceedingly ugly laceration of the fellow's nose and upper lip.

Quite a casual examination showed the case to be in the *vocative*, as far as a material portion of the lip was concerned; but when I learned that the missing part was in Jerry's yard, I thought the case might more correctly be considered as in the *ablative;* not so "*absolute*," however, as to deter me from attempting some adjustment of the remaining parts.

With the assistance of the office-boy, I essayed the task, and in doing so, made the discovery heretofore alluded to—namely, the possible benefit or advantage there is in the redundancy and extensibility of a negro's lips. Five silver sutures, passed well into the mucous membrane of the lip and thence through the superior margin of the laceration, secured satisfactory coäptation. The split through the *ala nasi* was properly adjusted by means of adhesive strips, and the negro dismissed, with instructions to return in four or five days for the removal of the sutures. It was over a week before he presented himself; and, upon examination and removal of the wires, it was ascertained that ready union had been secured throughout, and the result was quite satisfactory. The commissure of the lips was complete, notwithstanding the tension that had been made by the sutures. The aristocratic shortening of the upper lip merely imparted to it a slight scornfulness of expression, and fixed the feature permanently in the *accusative*, as far as Jerry and his dog are concerned.

Respectfully,

PAUL DEL. BAKER, M. D.

CHEMICAL AND PHARMACEUTICAL.

"Diruit, ædificat, mutat."—Hor.

Analyses made of beer yeast and cobra-poison are said to have proved these two substances to be exactly identical in composition. Such an announcement will be a veritable godsend to the anti-bacchanals, with whom it is a favorite device, when bemoaning the follies of their benighted brethren, to exhibit a bottle containing a disagreeable-looking fluid declared by them to be four-penny ale from which the spirit has been eliminated. The teetotallers, who, like the law, take no notice of extreme trifles, will probably, in their great joy, "overlook the fact that minute quantities of other elements may be present in the yeast and poison respectively, although they elude the grasp of the chemist;" sufficient for them that the same respective quantities of carbon, nitrogen, oxygen, sulphur, and hydrogen are contained in beer-yeast as in the poison of the cobra.—*Food Journal.*

Poisonous Univalves.—Seven individuals who had eaten snails at dinner were, so says the "Montpelier Medical," affected with sickness, diarrhœa, giddiness, fever, etc. No doubt could be entertained as to the cause of the poisoning. The seven persons had all eaten of the snails, whereas they had not all eaten of the other dishes served up at the dinner. The pan in which the snails had been cooked was in perfect condition, and had been freshly tinned. The poisoning, therefore, took place through the snails themselves. It is well known that they often feed on poisonous plants, such as belladonna, digitalis, and hemlock, and on the fields from which the snails had been gathered were found boxwood, euphorbia, and prickwood. It is on account of this that snails gathered to be eaten are generally submitted to a few days' previous fasting.—*Food Journal.*

Vehicle for the Administration of Chloroform.—A French medical journal remarks that the best course is to dissolve the chloroform in glycerin (one ounce), which is effected with toler-

able facility, and gives a very clear solution, pleasant to the taste, and with a strong odor of chloroform. This solution can be mixed in all proportions with water without the occurrence of any precipitation, though the odor is distinctly perceptible. In forming the mixture, it is well to add the chloroform slowly, and to mingle the two thoroughly. It should be left at rest for twenty-four hours; at the expiration of this period, a portion of the chloroform will be found to have collected at the bottom of the vase; this should be separated and mixed with an additional part of glycerin, when no further separation will occur. This mixture may be kept for some time without any loss of chloroform by evaporation.—*Boston Jour. of Chemistry.*

NOTE.—The best vehicle for chloroform is sweet milk.—E. S. G.

Sugar and Magnesia an Antidote to Arsenic.—The "Mouvement Medical" relates various experiments conducted by M. Carl, with the result of showing that sugar, mixed with magnesia, may serve as an antidote in cases of poisoning by arsenious acid, in which cases, too, the internal use of the hydrated magnesia is most valuable.—*Lancet.*

An interesting case is reported by M. Dieulafoy in which an infant, six hours old, was poisoned by a dessertspoonful of laudanum, and from whose stomach the poison was extracted, before it had taken fatal effect, by means of the pneumatic aspirator.—*Exchange.*

Color Test for Chloral Hydrate.—If we agitate chloral hydrate with essence of mint, the mixture becomes rose color, and by degrees a deep red. Boiling does not destroy this color, and sulphuric acid renders it even more intense. M. Carl Jehu says that neither the other oxygenated essences nor the simple hydrocarbons produce this reaction—*Medical Press and Circular.*

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

"Judex damnatur cum nocens absolvitur."

The Review Department of the Journal has been so much amplified in recent issues, that there has been a want of space in which to acknowledge the receipt of a large number of books, pamphlets, reports, addresses, etc. As the Profession is always interested in learning of the existence of all works, large or small, on subjects engaging the study of physicians, the following list will most probably be as fully interesting as the regular reviews usually presented. Any inquiry in regard to these publications will be cheerfully given by their authors or publishers. The list is as follows:

The Puerperal Diseases by Fordyce Barker, M. D.; New York, William Wood & Co. A System of Midwifery, by W. Leischman, M. D.; Philadelphia, H. C. Lea, 1874. Diseases of Women, by Robert Barnes, M. D.; Philadelphia, H. C. Lea. Physical Diagnosis, by Dr. Kohlransch; New York, D. Appleton & Co., 1874. Gun-shot Wounds of Abdomen, by Eugene Penquet; New York, Wm. Wood & Co., 1874. Report U. S. Marine Hospital, 1873, by John M. Woodworth, M. D.; Washington, D. C., 1873. Gun-shot Wounds of the Peritoneum, by Hunter McGuire, M. D.; Richmond, Va., 1873. Report of the Hospital for the Insane of West Virginia; Charleston, W. Va., 1873. Relations of Colorado to Pulmonary Consumption, by Thos. E. Massey, M. D.; Denver, Col., 1874. Contributions to the Study of Yellow Fever, by Dr. J. M. Toner; Washington, D. C., 1874. The Larynx, by Thomas Brian Gunning, Baltimore Maryland, 1874. Cholera at the Military Posts in New York Harbor; New York, 1868. Yellow Fever Epidemic of Memphis, Tennessee, by Y. R. LeMonnier, M. D.; New Orleans, La., 1873. The Influence of Surroundings, by Jos. O. Hamilton, M. D.; Jerseyville, Illinois, 1873. Transmission of Syphilitic Contagion, etc., by R. W. Taylor, M. D.; D. Appleton & Co., New York, 1874. Report of First Kentucky

Lunatic Asylum, 1873. Report of Western Kentucky Lunatic Asylum, 1873. Report of Second Kentucky Lunatic Asylum, 1873. Proceedings of the Eastern Medical Association; Goldsboro, N. C. Insufficiency of the Internal Recti Muscles, etc., etc., by Samuel Theobold, M. D.; Baltimore, Md., 1874. Galvano-Therapeutics, by David Prince, M. D.; Jacksonville, Ill., 1873. Des Rétrécissements de L'Urètre, par T. B. Curtis, M. D.; Paris, France, Bailliere & Co., 1873. Labor by Occipito-Posterior Positions not Natural, by D. W. Brickell, M. D.; New York. Displacements of the Uterus, by J. S. Shannon, M. D.; Chicago, Ill., 1873. Marcy's Sciopticon Manual; Philadelphia, 1873. The Progress of Medicine and Surgery, address before the South Carolina Medical Association, by Dr. J. T. Darby; Columbia S. C., 1873. Defence of Insanity in Criminal Cases, by H. L. Clinton; Albany, New York, 1873. How to Prevent Cholera, by Dr. R. F. Logan; Shelbyville, Ky., 1873. Nephrotomy, by Dr. W. W. Dawson; Cincinnati, Ohio, 1873. Treatment of Whooping Cough by Quinine, by Dr. B. F. Dawson; New York, 1873. American Science, by Dr. J. Lawrence Smith; Louisville, Ky., 1873. Transactions of the Michigan State Medical Association, 1873; Lansing, Mich. Annual Report of Pekin Hospital for 1871, by Dr. J. Dudgeon; Shanghai, China. Lectures, by J. J. Woodward, Surgeon U. S. A.; Washington, D. C., 1873. Strictures of the Urethra of Extreme Calibre, by Dr. F. N. Otis; D. Appleton & Co., New York, 1872. The True Object of Medical Legislation, by Dr. Stephen Rogers; Albany, N. Y., 1873. A Successful Case of Ovariotomy, by Dr. G. H. Bixby; Boston, J. Campbell, 1872. Amnesic and Ataxic Aphasia, by Dr. T. M. B. Cross; Louisville, Ky., J. P. Morton & Co., 1872. Chemical and Therapeutical Agents, New and Old; Billings, Clapp & Co., Boston. Infant Diet, by A. Jacobi, M. D.; New York, G. Putnam & Sons, 1873. Use of the Seton in Chronic Affections of the Womb, by Ely Van De Warker, M. D.; J. Ross & Co., New York, 1872. In Memoriam, Matthew Fontaine Maury, LL. D.; Lexington, Va., 1873. Clinical Notes on Nervous Diseases

of Women, by W. B. Neftel, M. D.; New York, G. P. Putnam & Son, 1873. Archives of Ophthalmology and Otology, by H. Knapp, M. D. and S. Moss, M. D.; William Wood & Co., New York, 1873. Ophthalmic Contributions, by George Strawbridge, M. D.; Philadelphia, Lindsay & Blakiston, 1873. Inner Life of the V. M. I. Cadet, by Francis H. Smith, LL. D.; Lexington, Va., 1873. Annual Report of the Surgeon-General U. S. A., Washington, D. C., 1873. Communications of the Massachusetts Medical Society; Boston, David Clapp & Son, 1873. Annual Report of the Secretary of the State of Indiana; Indianapolis, Sentinel Company, 1873. An Examination of the Medical Evidence in the Trial of Mrs. E. G. Wharton, by S. C. Chew, M. D.; Wm. Wood & Co., New York, 1873. The Gettysburg Katalysine Water; 1872. Report of the Massachusetts Charitable Eye and Ear Infirmary, by Alfred Mudge & Son, Boston, 1873. Coccyodynia, by Dr. Edward Jenks; Lansing, Mich. W. S. George & Co., 1873. Burns and Scalds, by Joseph F. Montgomery, M. D.; San Francisco, Cal., J. F. Brown, 1872. Varicocele, by Octavius A. White, A. M., M. D.; New York, D. Appleton & Co., 1873. On the Granular Cell found in the Ovarian Fluid, by Thomas M. Drysdale, M. D.; Philadelphia, Collins, 1873. Memorial of the American Medical Association with regard to the Rank of the Medical Corps of the United States Army; Washington, D. C., 1873. Transactions of the American Ophthalmological Society; New York, Wm. Wood & Co., 1873. Transactions of the Illinois State Medical Society; Chicago, Fergus & Co., 1873. Proceedings of the Eastern Medical Association; Goldsboro, N. C., 1873. Why are not all Physicians Homœpathists, by W. H. Holcombe, M. D.; Chicago, Halsey Bros., 1874. Health Officer's Report, by Robert Lebby, M. D.; Charleston, S. C.; Republican Printing Co., 1873. Annual Report of the Board of Health of Baltimore, Md.; Baltimore, John Cox & Co., 1874. Transactions of the Fourth Annual Session of the Medical Society of Virginia, Richmond, Va.; Fergusson & Rady, 1874. Annual Report of the Board of Health of Louisiana; New Orleans, 1874. Report of the

Health Officer of San Francisco; San Francisco, Spaulding & Barto, 1873. Remarks on the Intermaxillary Bone in Hair-lip, by W. R. Whitehead, M. D.; Denver, Col., Tribune Steam Printing Company, 1874. Dictionary of Elevations and Climatic Register of the United States, etc., by Dr. J. M. Toner; Washington, D. C., 1874. Epidemic Diseases and Meteorological Influences, by C. Spinzig, M. D.; St. Louis, Mo., 1874. Report of Western Lunatic Asylum of Virginia; Staunton, Va., 1872–3. Report of New York Hospital and Bloomingdale Asylum; New York, 1873. Mortality Experience of American Missionaries, New York, 1873. Report of Committee on Yellow Fever, Shreveport, La., 1873.

MISCELLANEOUS.

"Non omnes eadem mirantur ament que."

Administration of Arsenic to Phthisical Sufferers.—"L'Union Medicale" sums up Dr. Jaccoud's experience of the above, as related in the recent publication of his clinical lectures. "Arsenic powerfully ameliorates the nutritive process in chronic pulmonary phthisis. It abates nervous excitement, and possesses a marked antifebrile action, which can combat efficaciously the evening intermittent attack. Dr. Jaccoud exclusively prescribes granules of arsenious acid, containing one milligramme each of this substance (1-66 gr.). They are taken at the beginning of the two principal meals. Dr. Jaccoud begins with two granules daily, and every eight days the dose is increased, until it attains from eight to ten a day, which is the maximum dose. This maximum dose is kept up as long as there is no production of acute symptoms, with pseudo-continued fever."—*London Lancet.*———*Proposed Legislation.*—In the seventeenth century a law was in force in England that all women, of whatever age, rank, profession, or degree, whether virgins,

wives or widows, who should impose upon, seduce, and betray into matrimony any of his Majesty's male subjects by scents, paints, cosmetics, washes, artificial teeth, false hair, Spanish wool, iron stays, hoops, high-heeled shoes, or bolstered hips, should incur the penalty of law, and that the marriage should stand null and void. It is said that Mr. Gladstone, to increase his popularity, is about to have this law revived.—*Druggists' Circular.*———*Cysticerci in the Brain.*—At the autopsy of a man aged thirty-eight, three hydatids, each the size of a pea, were found imbedded in the cortical substance of the cerebrum. Although the presence of these parasites in the brain usually gives rise to severe mental disturbance, in the present instance no symptoms of disease of the brain had ever been manifested.—*Centralblatt fur die Medicinischen Wissenchaften.*——*Treatment of Threadworm.*—In a recent lecture by Dr. J. Spencer Cobbold, it was stated that the difficulty experienced by physicians in relieving patients from oxyuris vermicularis arises from the old and mistaken notion that the parasite resides in the rectum and sigmoid flexure, whereas recent investigations have shown that the entire length of the colon is the territory inhabited by the threadworm, while the cæcum constitutes the parasite's true headquarters. For this reason, active saline cathartics should be given to wash out the contents of the colon and cæcum, injections being afterwards given to dislodge such oxyurides as have been driven down to the lower bowel.—*Ex.*———*The Efficiency of Enemata.*—Gustav Simon has succeeded in demonstrating that a stream of water forced into the rectum by means of a syringe may be made to penetrate the entire length of the large intestine, and possibly extend also into the small intestines. His experiments were performed upon two separate patients, each of whom happened to have a fistulous opening in the ascending colon, near its junction with the cæcum.—*Archiv fur Klinische Chirurgie.*———*Case of Neuralgia of the Testes Cured by Electricity.*—A young man free from all syphilitic disease experienced such intense pain in the testes that he urgently asked Dr. Felippi to perform castration.

The case was carefully made out to be neuralgia, independent of any affection of the testicle or of any accumulation of fæcal matter, and in five sittings the patient was entirely cured. Dr. Felippi made use of a weak and direct constant current.—*L'Imparzaile.* ——— *Onychia Maligna.*—Rest and attention to the state of general health having secured, the fungous growth is then burnt with strong nitric acid, washed with water, and poulticed. The relief is certain, and the repetition of the application is seldom necessary. If there should be any trouble with the nail, the tender flesh may be protected by the insertion of a thin piece of compressed sponge, kept in its place by strips of plaster applied longitudinally to avoid compression.—*British Med. Jour.*

MEDICAL NEWS.

'Nulla dies sine linea."

Appointments, Honors, etc.—Dr. A. T. Barnes has been appointed Superintendent of the Southern Illinois Insane Asylum, at Anna.—The Hastings gold medal of the British Medical Association will be given this year for the best essay on "The Action of Alcohol in Health and Disease."—Dr. Devergie is President of the Academy of Medicine of Paris for the present year.—Dr. F. Macnamara has been granted a bonus of 5,000 rupees by the Government of India for his invention of a filter for use in the army.—Dr. Tilt has been elected President of the Obstetrical Society of Great Britain; Sir W. Jenner, Bart., President of the Pathological Society of London; and Mr. Prescott Hewett, President of the Clinical Society of London. —Professor Rindfleisch, of Bonn, succeeded Professor Klebs in the chair of Pathological Anatomy in the University of Würzburg. Professor Klebs has accepted an appointment in the University of Prague.———*Journalistic Notes.*—The "Cana-

dian Medical Times" has ceased to exist.—The "Kansas City Medical Journal" is now issued every month instead of every second month, as formerly, and shows other signs of prosperity. ———*A National Board of Health.*—The Congressional House Committee on Commerce, on January 28th, authorized the chairman to report a bill to prevent the importation of contagious or infectious diseases into the United States. It provides that the surgeon-generals of the army and navy, and the supervising surgeon of marine hospitals, of the treasury, shall constitute a board of health, with the power to establish and enforce such rules and regulations as are necessary to prevent the importation of contagious diseases, and that the regulations, when approved by the President, shall have the force of law. It does not allow any interference with State or municipal regulations.—*Ex.*———*Inoffensive Sponge-Tents.*—Lawson Tait, F. R. C. S., in the "Medical Times and Gazette" of January 10th, recommends the use of a five per cent. solution of oil of cloves in the preparation of sponge-tents, as a means of rendering them inoffensive and obviating the danger of septic peritonitis from their use. He finds a tent thus prepared perfectly free from the usual disagreeable odor after remaining twenty-four hours in the uterus.—*Ex.*———*Death from the Use of Perchloride of Iron.*—A foreign contemporary records a fatal instance of the use of a uterine injection of perchloride of iron. Peritonitis supervened soon after administration, and death occurred in thirty hours.—*Lancet.*——— *Pulmonic Candles.*—The latest invention for the benefit of sufferers from chronic bronchitis and allied maladies is a candle, containing certain balsams and resins, which, when burned, renders the air fragrant and soothing to the lungs.—*Ex.*——— *Leipsic University.*—It has been determined to expend 250,000 thalers for the establishment of a chair for Psychiatry in this University.—*Ex.*———It is stated that Professor Owen has just discovered in the London clay, at Sheppey, a new fossil bird with teeth somewhat resembling those in the Australian hooded lizard. He concludes it to have been web-footed and a fish-

eater. No evidence of true teeth had previously been known in any bird.—*Exchange.*———*Acetic Acid Spray in Diphtheria.*—At the Charity Hospital, New York, very satisfactory results have been obtained in the local treatment of diphtheria by the local use of acetic acid, in solutions of varying strength, in the form of spray produced by the atomizer. It seems to have the power to dissolve the membrane, and in several cases where well-developed and somewhat advanced croupy symptoms were present all were relieved, and that quite speedily, by the use of this agent.—*N. Y. Med. Record.*———A medical lady in Boston, Dr. Mary Safford Blake, is lecturing on dress reform. Her audiences are described as presenting a "very fashionable appearance."—*Ex.*

EDITORIAL.

"Nullius addictus jurare in verba magistri."—Hor.

WHAT ARE WE TO THINK OF CALOMEL?—A prominent physician of Lexington, Va., recently wrote to this Journal, as follows: "What are we country doctors to think about calomel?" The accomplished questioner, like thousands of those so often termed "country doctors," is as well able as the best of his Profession to determine this question and to give the answer. This answer must be based upon observation at the bedside; for observation upon human beings is in this case far more valuable, than the results of infinite experiments upon dogs. The fact that dogs suffering from traumatic lesions fail to give any satisfactory evidences of the cholagogue effects of mercury is certainly a most beggarly reason for claiming that human beings, either sick or well, do not experience beneficial effects from the administration of this great and invaluable medicine. While there are, it is fully admitted, in the human family, "curs of high and low degree"; "hounds and greyhounds, mongrels and spaniels," that in the language of Mac-

beth, "go for men"; still, neither the spectre-haunted Thane of Cawdor, nor any one else, ever believed that the parallelism so close between the bi-pedal and quadrupedal dog in their acts and attributes could be extended (as Dr. Hughes Bennett and others would have us believe) to the behavior of each, as their respectable and respective livers are titillated by the magic touch of matchless—mercury!!

Man may have been a dog once, as Huxley is not unwilling to believe, and, as Darwin fondly persuades himself, was actually the case; but he is not generically, if exceptionally, a dog now. Until the analogies are therefore more invariable and complete, it is asking too much, that the physician should take the medicinal responses of the poodle as a precedent, when he seeks to solve the stupendous question of man's relations to mercury!! The poodle "has had his day." He must now be "ruled out" of the therapeutical ring of science; and medical science must study the effects of mercury at the bedside of man; not in the litter-straw of the kennel. Observation is not, as Niemeyer would have one believe, the all in medicine; but it is very much; and, in therapeutics, it is certainly nearly the all. One can not repudiate the splendid and numberless observations of the great past, as to the palpable effects of mercury upon man, because the dog has walked upon the stage, and some would guage him medicinally by the measurements applied to his master. "*Nulla vestigia retrorsum* (take no steps backward), may be a divine aphorism for the moralist and the reformer, but it is the *ignis fatuus* of the scientist in medicine. The therapeutist at least must step backwards; he must go away from the kennel, and go back to the bedside. He must observe there the facts; multiply and record them. This is the only true solution to therapeutic problems. It is the only answer to the question, "What are we to think of calomel?" *Note*—Read the article in this issue by Dr. H. C. Wood.

BREVITIES.

The "Virginia Medical Monthly" is the title of a new jour-

nal to be published, at Richmond, Va., in April. Its editor is Dr. Landon R. Edwards. It is sincerely hoped that he and his work may do well. More will be added when a copy of the work is examined. It is a fearful undertaking to found a journal. When St. Paul gave the memorable account of his trials, his troubles, and his perils, he evidently thought it a most harrowing picture; but if he had ever founded or edited a medical journal he would have regarded the Tartarus through which he passed as an Elysian field, beautiful with flowers and sweet with their balmy and seductive odors.———Kidder's electrical apparatus is deservedly receiving much commendation. It is worthy of entire confidence, and is entirely different from the Davis and Kidder crank machine, which many suppose it to be. Those who wish to test the excellent therapeutic effects of electricity would do well to send to Dr. Kidder, 50 Union Square, New York, for some of his publications.———The remains of Dr. Richard Rudd (who died in Paris) have been brought home, and have been interred here with becoming and appropriate services.———*An Anatomical Satire.*—Brown-Séquard, examining the brain of Sumner, for traces of the caning inflicted by Brooks. Mr. Sumner's quiddities and eccentricities in legislation have been variously satirized; but this is "the unkindest cut of all," whether political, physical, or physiological. To have been black and blue, as well as white, in life was unfortunate indeed; but what is to be said of this unique disfigurement of Brown? It is difficult to be serious and respectful, as all should be, in the presence of this death, when it has thus been made the subject and occasion for a lamentable farce. When the composer of the opera of Othello makes the phrensied Moor pipe out a grotesque solo over the murdered Desdemona, every one feels that he has converted a solemn tragedy into a great farce. It seems that the scalpel of the anatomist is now to bear away the unenviable palm from the baton of the musician.———Great effort has been made (as was promised) to issue this Journal earlier in the current month. The work will be mailed earlier hereafter.

SUPPLEMENT.

DR. JAMES M. HOLLOWAY.—It will be remembered that, in August last, a statement was made in this Journal to the following effect; viz., that eight-tenths of the Faculty of the Louisville Medical College had requested Dr. Holloway to resign his chair in the College mentioned; and that Dr. Holloway refusing to do so, had soon after left the city, etc.

A short time after this publication, the Class commenced to assemble, and for its good, and for the good of the Institution, this matter was no longer publicly agitated. The Faculty had done what it believed to be its duty; what it had twice done previously and unanimously in regard to other members, Dr. Holloway on the last occasion being one of the committee appointed to act; what every Faculty has perhaps done; and what every Faculty may, at any moment, be called upon to do. While such painful requests are always made for grave reasons, such as neglect of duty, charlatanism, loss of professional caste, the use of unworthy means for obtaining practice, the undermining of professional brethren in their professional work, the obtaining of money under false pretences, incompetency, loss of personal character, etc., these reasons are, of course, not given on such occasions; it being customary only to make the request "for the good of the Institution." The effect of such a request is usually the prompt tendering of the resignation desired. Sometimes, the reason for the request is demanded. Exceptionally, the request is refused, with the expressed determination to rely upon a trial (before some authorized Body) for charges preferred. Unless a Faculty subjects a colleague to such an ordeal, (which, whatever the result, must stain him ineradicably,) such a refusal must terminate concerted action. The causes given induced the Faculty of the College mentioned to adopt the course above described; viz., to abstain from pressing the matter further. Indeed, it was never their intention to prefer charges, but simply to make the request usual on such occasions; any other course, if adopted, being non-corporate in character.

The Faculty abstaining from further action, Dr. Holloway was allowed to discharge his duties, unmolested by either word or deed. He did discharge these duties very efficiently and faithfully. Indeed, a few of the Class testified to this fact by contributing a small sum of money and presenting Dr. Holloway with a cane. That this was done by "the class," as stated in the daily newspapers, and on the cane, is not true. The Faculty, though opposed to all such demonstrations, believing (as

all Faculties do) that they lead to very bad results, did nothing to prevent such action, because the surrounding circumstances were unusual and peculiar. So the session closed.

The writer believing that it is against the interests of any College for personal intercommunication between its Dean and the members of its Faculty to cease, went to Dr. Holloway with the view of terminating this condition. He said to Dr. Holloway, that so far as he had investigated the charges made freely by many last Summer, they seemed to be statements and not demonstrated facts; that he had so publicly stated, and would do so again. The same statement has several times since been publicly made. Exception was made by both himself and Dr. Holloway in regard to the sending by Dr. Holloway of printed prescription or advice to the patient of another physician; this prescription having been sent in an anonymous letter, and having been borne by Dr. Holloway's son. This charge is admitted by Dr. Holloway to be the truth. He claims that he acted thus with no unworthy motive, and as the object of this statement is to do the fullest justice, this claim is prominently and distinctly published. During this interview, Dr. Holloway stated that he had in his possession written evidences sufficient to vindicate him from the charge that had been made against him. After due reflection, it occurred to the writer, as Dr. Holloway had unquestionably been placed by this Journal in a most painful position before the medical Public, that, if practicable, he should receive the fullest vindication which truth and justice would warrant and sustain. Dr. Holloway was therefore informed, if he would send the written evidences mentioned, that they would be examined, and that the fullest justice would be accorded to him. That there shall be no possible misconstruction made by the Public in regard to this most important fact, the writer quotes from Dr. Holloway's letter sent since that interview occurred: "I did promise at your request to let you read the documents, in my possession vindicating me from these rumors. This promise was made in your parlor, on the 3d of March."

When these "documents" are sent they will be fairly examined, and the result will be carefully and faithfully given in a supplement.

NOTE.—Some may ask why this statement is published. The answer is threefold: First, because the subject was brought before the Public by both the medical and secular Press, and is at present in a condition painful to one and unsatisfactory to all. Second, because Dr. Holloway expects and desires it, and as he is the suffering party, he deserves every consideration. Third, because when any statement is made in this Journal, it will be substantiated if correct, and if incorrect, publicly and fully withdrawn. The publication is made as a supplement, and of course not at the expense of the subscribers.

THE RICHMOND AND LOUISVILLE

MEDICAL JOURNAL.

VOL. XVII. MAY, 1874. No. 5.

ORIGINAL COMMUNICATIONS.

"Qui docet discit."

ART. I.—YELLOW FEVER IN MEMPHIS IN 1873. By R. W. MITCHELL, M. D., Memphis, Tenn.

Having been actively engaged, professionally, during the recent prevalence of the yellow fever in our midst, and having had the best opportunities for studying the origin and peculiar features of this epidemic, it has seemed to me that I would fail in the discharge of a duty, did I not put on record the following statement of facts:

On Sunday, the 10th day of August, the tow-boat Bee, from New Orleans, landed at the foot of Market street, alongside the steamer Mary Boyd, and remained there several hours for the purpose of taking on supplies. Two sick men came ashore at this time from the tow-boat. One of them, who, it is said, was making his way to North Alabama, and whose name was W. W. Davis, was too feeble to travel, and was taken to the Adams-street station-house, where he died on the following day. The other, whose name I have not been able to learn, stopped near

the river, in front of one of the shanties of "Happy Hollow," into which he was afterward taken, and in which he died the next day, or the day after. Not very long after this a drayman, named Peter Riley, who had been with the sick man, and had given him assistance, was attacked with fever and died. In this way the disease originated in "Happy Hollow," and before the last of August quite a number of deaths had occurred from it in this particular locality.

"Happy Hollow," I should state, is a spot on the slope of the hill from Front street to the river bank, and extends from the foot of Poplar to Market street. It covers an area of about two hundred and fifty yards square. This locality is subject to overflow, and consequently most of its cabins are raised on piles. Its population is almost exclusively Irish of the poorest class, and they are very much crowded together.

From this description it will be seen that the fever was introduced under circumstances and in places where it was most likely to escape medical observation, until it had made considerable headway. And this was really the case, for after careful inquiry among those physicians who did the practice of these people, I was satisfied that no suspicion was entertained concerning the real nature of the fever, until about the 5th of September, at which time a very large number of the denizens of the "Hollow" were sick. The first case which came under my own observation was that of a man named Shine, who lay sick with fever very near to the river on Market street. I saw him first on the 25th of August, and being then ignorant of the foregoing facts, did not suspect yellow fever until suppression of urine occurred on the 28th. He died, but there was no marked yellowness of skin, nor black vomit. About the same time or a few days after, I heard of a similar case which had terminated fatally in the lower portion of the city, but had originated in "Happy Hollow." I at once returned to the house of my patient, and found that in the meantime four deaths had occurred in its immediate neighborhood, and that these cases had been marked by yellowness of skin and black vomit.

It was now evident to those engaged in the treatment of the disease that it was neither bilious fever nor dengue, as they had at first supposed. The number of cases increased rapidly. The fever was no longer confined to "Happy Hollow." It extended northward along the river to Promenade street, and getting up on the top of the bluff, made its way along Front in the same direction, and eastwardly on Exchange and Market streets towards Main. This was the status quo on the 10th of September, when the public were made acquainted with the situation.

It will be seen that I intend to convey the impression that yellow fever was brought to Memphis by the tow-boat Bee, and that the sick man who walked across the bow of the Mary Boyd on the 10th of August, conveyed the germs of the disease into the bosom of "Happy Hollow." The seed thus sown fell upon good ground, and brought forth fruit an hundred fold.

As corroborative evidence, it will be profitable to follow the Bee after she left Memphis, on her way up the river. Her captain, Mr. C. B. Goll, was taken sick before she reached Helena, and was known to be lying ill when she landed here on the 10th of August. He died on Monday night, near Osceola, ninety miles above this city, and his remains were brought back here on the Future City, for shipment by rail to St. Louis. The Bee went to Cairo, where she is said to have remained idle until cold weather, because she was considered an infected craft, several of her crew having sickened and died after the death of Captain Goll.

The fever having obtained a foothold on the top of the bluff, now spread from house to house, from block to block, from street to street. That portion of the city first attacked is the oldest, most densely populated, and worst built. It consists in great part of tenement houses; its population is mainly Irish, and they are crowded together, with none of the comforts and but few of the necessaries of life. Yellow fever appearing in such a locality and under such circumstances, must of necessity

find abundant material on which to feed, and be attended with a fearful mortality.

The manner in which the disease was propagated was studied with much interest. It was not at all the manner observed by diseases which are said to be under epidemic influences. There was an area or a district from the very beginning, gradually increasing from day to day, which was regarded as infected; in which new cases were appearing, and outside of which no cases occurred, unless in those who had come in contact with the sick, or who had been in the midst of the infected district. In some instances, persons living in healthy portions of the city, after contracting the disease by sojourn in "Happy Hollow," did not communicate it, while in others the reverse was true. One of the city officials, whose duty required his presence at the Exchange Building during the day, a locality bordering on "Happy Hollow," was taken sick with the fever, and went to his home in Chelsea, a mile distant. Without any other exposure, his wife and two children were soon afterward attacked. A gentleman on Wellington street, a locality entirely free from yellow fever, contracted the disease by attendance on the sick. His wife being in the country at the time, came home at once to nurse him. She was soon afterwards attacked herself with yellow fever, and two servants also who had been with her husband during his illness. These persons had no other opportunity of contracting the disease, except by attendance on the sick man. These and numerous other instances of the kind showed very clearly, in my opinion, that yellow fever was propagated here in the same way that typhus and other diseases of the infectious class are. I am familiar with all the arguments pro and con upon this point, and while as a matter of course I admit that the disease may be propagated through the agency of fomites, I believe that practically it is very seldom so; but that its peculiar poison is in the body or person of the sick, and that the sanitary measures necessary to prevent its introduction into a community, or being once introduced, to prevent its spread, are precisely the same which are adopted in all well-

regulated cities with reference to small-pox and typhus. So far as I could judge, this fever was unmistakably yellow fever. I was already familiar with it from residence in New Orleans and Vicksburg, and could not see that it differed in any essential features from the disease as I had seen it in those places. Some of our physicians insisted for some time that it was a malignant form of malarial fever, but I contend that a certain diagnosis as to its character was impossible without the use of the thermometer; and with the aid of this instrument it was easy to see which cases were malarial, and which were yellow fever; and to detect intercurrent malarial attacks in the course of yellow fever.

In no other disease with which I am acquainted is there so great a discrepancy between the pulse and the temperature. Oftentimes when the cool surface and slow pulse would lead me to believe my patient free from fever, I would be startled to see the reading of the thermometer in the arm pit. By its aid I was often enabled to recognize impending danger, in time to adopt measures which led to satisfactory results. These considerations induced me to keep a faithful record of the thermometric range in a number of cases. I used the thermometer as a guide to treatment in all my cases, but could find time to keep a note of its range in those only which are found in the following table, together with eleven others, which were unfortunately lost. [See table, pp. 542–3.]

I have seen no record of the temperature in yellow fever, except that furnished by the able and interesting paper of Professor Jones, of New Orleans. His report, however, is somewhat unsatisfactory, from the fact that he does not state at what time of the day the observations were made, and because only one observation daily was made. In this disease changes take place very rapidly, and it is very desirable that three observations daily should be made, or at least two.

The observations here reported were made by myself between the hours of 7 and 10 A. M. and 5 and 8 P. M., and are as correct as I could make them. The patients represent most of

the professions and callings; were of both sexes and of all ages; were in good circumstances, and received as good attention as could be had at such a time. They were all seen soon after being attacked, from one hour to six, and sometimes before reaction had occurred, and in every instance before any treatment had been adopted, except the inevitable mustard bath and orange-leaf tea.

The urine was examined in a large number of cases. The quantity passed in twenty-four hours varied from four to sixteen ounces. The specific gravity in favorable cases was usually from 1030 to 1035; reäction as a rule acid. Ardor urinæ was a distressing symptom with very many patients, being due to the highly concentrated state of the urine, which resulted in part from the fever, and in a great measure also from the excessive diaphoresis which was induced by improperly piling blankets on the patient. My attention was drawn to the peculiar color of the urine, which I regarded as characteristic; this was a light clay color which it assumed on cooling, the turbidity being due to precipitation of the urates. This to be sure is simply in accordance with the law which prevails in fevers generally—viz., an increase of the solid constituents and a decrease in the water of the urine; but the changed appearance was so uniform during the prevalence of this fever that I at length looked upon it as diagnostic.

In cases which recovered, I found but a trace of albumen in two or three instances only. Where I obtained urine from the bladder of patients suffering from suppression, albumen was found in abundance.

In all my female patients without exception (thirty-five in number) who had reached the age of puberty, there was hæmorrhagic flow from the uterus in variable quantity, at some time during the course of the fever. Three of these patients were pregnant, and all miscarried. One of them on the fifth day of the disease at the third month, recovered; another on the fourth day at the second month, recovered; the third on the fifth day at the sixth month, black vomit and death.

I will now proceed to give an outline of the treatment which seemed to me most judicious in this disease, and which I employed with, upon the whole, satisfactory results.

After reäction has been established, by the administration of a mustard foot-bath and a cup of hot tea, a purgative in many cases will be required. Castor oil is the most suitable of the class, if it can be retained on the stomach. If the patient is unable to take it, some one of the saline aperients should be preferred. I discarded the use of mercury very early in the season, finding it uncertain and unsatisfactory in results, failing to produce bilious discharges, and often acting as a decided irritant upon the intestinal tract.

I gave quinine a fair trial, and was unable to see any benefit from its administration. On the contrary, its unpleasant effects upon the stomach and its disturbing influence upon the nervous system soon induced me to abandon it.

To regulate the action of the skin, I found in practice an exceedingly difficult matter. To induce and keep up a gentle moisture upon the surface is all that is desired, and this was the instruction given to my patients. But the popular prejudice was so strong in favor of the "sweating treatment," that I often found on my return the patient drenched with sweat and almost overwhelmed with blankets.

The skin in yellow fever usually responds very readily to remedies addressed to it, and we quite as often had to check its action as to stimulate it.

The following combination answered the several indications better than any other:

Tinct. Gelsemin;
Tinct. Digitalis, aa. ℥ij. ad ℥iv.;
Spts. Ætheris Nitrici, ℥iv. ad ℥i.;
Syr. Zingiberis, ℥i.;
Aquæ q. s. ad ℥vi. M.

Sig.—A tablespoonful every two hours in a wine glass of ice water. I know of no combination which can be compared to this as a nervous sedative and gentle diaphoretic in febrile con-

ditions. The digitalis seems to act with the gelseminum in subduing, steadying and strengthening the action of the heart, and also to coöperate with the nitre in favoring proper action of the kidneys; while the ginger, in most cases, was very grateful to the stomach.

Irritability of stomach was best relieved by powdered ice and lime water internally, and by sinapisms to the epigastrium. In obstinate cases, I obtained good results from the use of a fly blister in place of the mustard.

To promote sleep, and to relieve restlessness and delirium, a mixture of chloral and bromide of potassium answered well:

℞—Chloral, grs. xxv.;
Potassii Bromid., grs. xv.;
Syr. Zingiber, ℥ij.;
Aquæ, ℥iss.;

the whole quantity given at once and repeated every hour until sleep is procured. Sponging the surface of the body with tepid water and alcohol often seemed to abate the violence of the fever, and promoted quietude and sleep.

In sthenic cases, with very frequent pulse and high temperature, I found tinct. verat. viride of great service, and think no one need hesitate to use it. I gave it in ten-drop doses every two hours until the pulse was brought down to 100. If it sometimes produced nausea and vomiting, this was attended by no bad consequences, and was always readily controlled and relieved by a little brandy and water. It should be observed here that nausea and vomiting occur in the early stages of yellow fever, as they do in bilious or other fevers. They do not necessarily indicate or have any relation to the appearance of black vomit, which is the result of the transudation of altered blood through the walls of the capillaries of the gastric mucous membrane.

As the fever subsided and the pulse and temperature approached the normal standard, the administration of food and stimulants in small quantities, at short intervals, was commenced. Rice water, chicken water, beef tea and milk were

given at first every half hour in dose of a few spoonsful, and gradually the quantity and the interval were increased. Wine, whiskey, brandy and malt liquors were used according to the caprice of different stomachs. In this connection I feel constrained to say that I saw many patients who were literally destroyed by the indiscreet use of stimulants. Nurses and members of benevolent societies, in many instances, through mistaken zeal, by the administration of alcoholic liquors, were the cause of the death of persons who were doing well.

The return to solid food was very gradual, and during this period when the ravages of the disease were being repaired by food, the patient was kept perfectly quiet in bed, and not allowed to raise his head from the pillow. In eight or ten days permission to sit up may be granted.

There are two therapeutic agents in regard to which I would say a word of caution: these are bloodletting and opium. In a few instances I saw general and local bloodletting tried by other practitioners, where the pulse was full and frequent, and where there was active delirium; the result in all was fatal. My observation of the effects of opium agrees with that of others who have written upon this subject, that if used at all, it should be given in small doses and with extreme caution. In several instances through the mistakes or rashness of nurses, I saw patients who were doing well and promised to recover die from the effects of this medicine—suppression of urine and coma supervening in a few hours. In no case in which there was complete suppression did I see the patient recover, nor where the temperature reached 106° F.

In conclusion, I will say that the result in any given case of yellow fever will depend very greatly upon the management of the sick room. No one should be allowed to enter except the physician and nurses, until convalescence is satisfactorily established. In several instances where the patient was doing well, and fever nearly abated, I have seen a rapid and decided rise of temperature, with a return of unfavorable symptoms, induced by the admission of talkative and indiscreet friends.

RANGE OF THE THERMOMETER IN 45 CASES OF YELLOW FEVER.

	AGE AND SEX	PULSE AND TEMP'T	1st DAY		2d DAY		3d DAY		4th DAY		5th DAY		6th DAY		7th DAY	
			A. M.	P. M.	A. M.	P. M.	A. M.	P. M.	A. M.	P. M.	A. M.	P. M.	A. M.	P. M.	A. M.	P. M.
No. 1	Male	Pulse	.....	88	96	84	72	80	78	74	72	72	72	68	64	64
	Age 47	Tempt'e	.....	102.3	103.5	103.2	102	102.6	101.5	101	100.8	100.1	99.8	100.2	98.6	98.4
2	Female	Pulse	144	133	120	120	120	114	108	96	96	80	72	.....	68	.....
	Age 17	Tempt'e	104.3	104.5	103	104.3	103.7	103	103.5	101.3	101.1	99.5	98.5	.....	98.3	.....
3	Male	Pulse	96	92	68	64	60	60	56	70	60	.....	.....	.....	.....	.....
	Age 45	Tempt'e	102.5	104	100.3	100	99.8	100.3	98.5	99.7	98.2	.....	.....	.....	.....	.....
4	Male	Pulse	.....	116	112	108	84	100	80	78	72	.....	72	.....	.....	.....
	Age 15	Tempt'e	.....	103.5	102.5	103.3	101.6	101.6	100	99.8	99.5	.....	98	.....	.....	.....
5	Female	Pulse	.....	120	98	100	96	96	84	84	82	.....	80	.....	74	.....
	Age 23	Tempt'e	.....	103.3	101.2	102.5	101	102	99.6	99.3	99	.....	99.7	.....	98.5	.....
6	Female	Pulse	.....	104	100	108	80	102	84	84	82	.....	72	.....	.....	.....
	Age 42	Tempt'e	.....	102.5	102.1	103.5	101	101.5	100	100.3	99	.....	98.4	.....	.....	.....
7	Female	Pulse	160	130	105	118	104	96	80	78	72	.....	.....	.....	.....	.....
	Age 20	Tempt'e	103.5	104	103	103	101.5	100	99.3	99	98.3	.....	.....	.....	.....	.....
8	Female	Pulse	.....	120	106	106	108	108	100	96	92	96	86	72	72	.....
	Age 25	Tempt'e	.....	102	102	103.5	103	104 3	101.2	102.5	99	102	100	99.2	98.3	.....
9	Male	Pulse	88	.....	80	.....	74	.....	60	.....	58	.....	52	.....	48	.....
	Age 35	Tempt'e	102.6	.....	101.5	.....	101	.....	100.4	.....	100	.....	99.5	.....	99	.....
10	Male	Pulse	114	110	110	102	96	96	80	84	88	86	80	80	76	72
	Age 28	Tempt'e	104	104.5	105.5	103.7	102.5	102.5	100.7	102	100.3	102.7	100.5	100.7	100	99
11	Male	Pulse	.....	84	74	80	76	76	90	96	84	80	68	65	60	56
	Age 36	Tempt'e	.....	101.9	101	101.5	100.7	100.3	103	103.3	101.3	101.1	99.3	99.1	99	99
12	Female	Pulse	136	120	120	128	108	108	120	116	120	116	112	112	100	98
	Age 26	Tempt'e	104	104.5	104.5	104.3	102.2	103.2	103.6	102	102	101	100.5	100	99.5	98.5
13	Male	Pulse	112	108	88	104	92	88	80	88	88	86	80	.....	80	.....
	Age 39	Tempt'e	102	102.4	102.5	101 2	102.7	102.5	101.5	101	101.3	101.5	100.5	.....	98.2	.....
14	Male	Pulse	.....	108	92	84	84	80	76	72	72	72	64	64	60	60
	Age 24	Tempt'e	.....	105	102.5	104	102.9	102	103.3	103	102	103	100	100.2	99.2	98.6
15	Male	Pulse	92	92	88	70	78	76	68	68	60	60	60	.....	.....	.....
	Age 16	Tempt'e	101	101.3	101.6	102	101.6	101.3	101.5	100	99	99	99	.....	.....	.....
16	Male	Pulse	.....	80	80	74	88	88	84	80	72	.....	68	.....	.....	.....
	Age 43	Tempt'e	...	102	101.5	100	101	100.5	99	99.5	99.2	.....	98.3	.....	.....	.....
17	Male	Pulse	112	110	84	104	94	94	84	84	84	84	84	84	82	.....
	Age 18	Tempt'e	105 2	105	104.7	105.5	103.5	102.4	101.5	102	100.5	101	99.8	99.5	98.5	.....
18	Male	Pulse	.....	76	80	88	94	72	84	72	72	.....	68	.....	.....	.....
	Age 30	Tempt'e	.....	100.7	101.5	102	103.6	100.5	99	99.5	99.3	.....	98	.....	.....	.....
19	Female	Pulse	108	84	84	80	70	.....	64	.....	.....	.....	.....	.....	.....	.....
	Age 20	Tempt'e	101	101.5	99	99.2	97 5	.....	97.5	.....	.....	.....	.....	.....	.....	.....
20	Female	Pulse	.....	120	112	112	108	120	100	96	84	80	72	.....	66	.....
	Age 20	Tempt'e	.....	104	103	103.2	104	103.8	102	101.5	100.6	101	100.5	.....	98.5	.....
21	Female	Pulse	.....	96	100	96	84	.....	72	.....	60	.....	60	.....	.....	.....
	Age 25	Tempt'e	.....	100.5	101.2	100	99	.....	98	.....	98	.....	98	.....	.....	.....
22	Female	Pulse	114	112	84	96	90	84	72	.....	66	.....	60	.....	.....	.....
	Age 22	Tempt'e	102.5	103	100.2	101.5	98.5	99	98	.....	98	.....	98	.....	.....	.....
23	Male	Pulse	68	.....	60	.....	60	.....	58	.....	52	.....	.....	.....	.....	.....
	Age 65	Tempt'e	101	.....	100 5	.....	99.5	.....	99.5	.....	98.5	.....	.....	.....	.....	.....
24	Female	Pulse	132	144	124	108	100	100	100	.....	80	.....	.....	.....	.....	.....
	Age 9	Tempt'e	104.2	104	102	101.3	99.5	99.8	98.2	.....	98.2	.....	.....	.....	.....	.....
25	Female	Pulse	.....	108	88	88	84	84	80	72	66	.....	.....	.....	.....	.....
	Age 38	Tempt'e	.....	103	103	103	102.3	102	97.7	98.2	98	.....	.....	.....	.....	.....
26	Female	Pulse	.....	120	78	78	64	64	60	.....	60	.....	.....	.....	.....	.....
	Age 28	Tempt'e	.....	102.5	101	101.2	99.3	99.8	98.5	.....	98	.....	.....	.....	.....	.....
27	Female	Pulse	130	120	120	110	104	96	88	88	96	.....	80	.....	76	.....
	Age 24	Tempt'e	102	103.5	103.7	103.3	103.1	103	99.2	99.3	99	.....	98	.....	98	.....
28	Male	Pulse	88	88	66	... ..	58	.....	56	.....	52	.....	.....	.....	.....	.....
	Age 28	Tempt'e	101	100.5	98	.....	98	.....	98	.....	98	.....	.....	.....	.....	.....
29	Male	Pulse	.....	124	120	112	88	96	82	72	72	.....	66	.....	.....	.....
	Age 29	Tempt'e	.....	103 8	103.7	102.7	101.1	100 3	99.3	99 2	98.5	.....	98	.....	.....	.....
30	Male	Pulse	104	.....	96	.....	84	.....	78	.....	66	.....	66	.....	.....	.....
	Age 45	Tempt'e	101	.....	100	.....	100	.....	99.5	.....	98.6	.....	98.2	.....	.....	.....
31	Female	Pulse	96	.....	102	.....	102	.....	96	.....	94	.....	84	.....	76	.....
	Age 25	Tempt'e	100.5	.....	101	.....	102.8	.....	100 5	.....	99.3	.....	99.1	.....	98.3	.....
32	Male	Pulse	.....	108	84	78	72	80	68	64	56	.....	56	.....	56	.....
	Age 24	Tempt'e	.....	102.5	101.5	103	101.3	102.5	100.6	101 4	99.6	.....	99.2	.....	98.5	.....
33	Female	Pulse	.....	144	124	132	132	120	100	96	88	.....	88	.....	80	.....
	Age 11	Tempt'e	.....	103	102	103.5	103.5	103 4	100.6	100	99	.....	97.7	.....	98.4	.....
34	Female	Pulse	.....	92	104	94	90	84	92	88	76	80	72	.....	64	.....
	Age 40	Tempt'e	.....	101	103.2	104.5	102.3	102.3	101 7	101.5	100	99	98.5	.....	98.3	.....
35	Male	Pulse	84	84	68	72	60	68	72	72	72	66	66	66	66	.....
	Age 36	Tempt'e	103	103	102	103	104	104.2	103	102.7	102	101.6	101.6	101.5	99	.....

	AGE AND SEX.	PULSE AND TEMP'T	1st DAY		2d DAY		3d DAY		4th DAY		5th DAY		6th DAY		7th DAY	
			A. M.	P. M.	A. M.	P. M.	A. M.	P. M.	A. M.	P. M.	A. M.	P. M.	A. M.	P. M.	A. M.	P. M.
No. 36	Female	Pulse	.....	80	7 2	78	84	96	96	108	96	96	76	80	72	72
	Age 32	Tempt'e	.....	99.5	1 00	100.2	100.7	100.7	100.3	100.3	100.3	100	100.3	100.3	100	99
37	Male	Pulse	....	132	128	96	96	120	92	92	90	.....	90	.....	.....	.....
	Age 24	Tempt'e	.....	103.5	104	104.3	102.5	103.5	99.2	100	99.5	.....	99.5	.....	.....	.....
38	Male	Pulse	.....	102	108	108	100	108	86	108	.....	.....	.....	.....	.....	.....
	Age 25	Tempt'e	.....	106	104.5	105	101.2	101.2	100	102.5	.....	.....	.....	.....	.....	.....
39	Male	Pulse	.....	108	.....	96	.....	88	.....	84	.....	.....	.....	.....	.....	.....
	Age 35	Tempt'e	.....	103.6	.....	103.5	.....	103.6	.....	103	.....	.....	.....	.....	.....	.....
40	Male	Pulse	.....	96	106	104	92	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Age 46	Tempt'e	.....	103.2	103.2	103.7	101	.....	.....	.....	.....	.....	.....	.....	.....	.....
41	Female	Pulse	130	144	126	120	108	100	.....	.....	.....	.....	.....	.....	.....	.....
	Age 28	Tempt'e	101.7	106	104.2	104	103	102.7	.....	.....	.....	.....	.....	.....	.....	.....
42	Male	Pulse	.....	150	104	120	100	96	102	98	92	.....	.....	.....	.....	.....
	Age 41	Tempt'e	.....	101	101.5	105	104.3	104.3	102.3	103.1	102.5	.....	.....	.....	.....	.....
43	Male	Pulse	.....	120	104	104	94	120	100	120	.....	.....	.....	.....	.....	.....
	Age 47	Tempt'e	.....	103	101.2	101.5	99.5	105.5	99.8	105	.....	.....	.....	.....	.....	.....
44	Male	Pulse	120	120	108	96	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Age 33	Tempt'e	103.5	105	104	104.1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
45	Male	Pulse	.....	.....	124	.....	132	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Age 10	Tempt'e	.....	.....	104	.....	104.8	.....	.....	.....	.....	.....	.....	.....	.....	.....
46	Male	Pulse	.....	144	116	120	120	108	.....	.....	.....	.....	.....	.....	.....	.....
	Age 11	Tempt'e	.....	105.2	104.2	104	103.7	104	.....	.....	.....	.....	.....	.....	.....	.....
47	Male	Pulse	.....	106	96	108	96	94	108	108	104	136	96	.....	.....	.....
	Age 54	Tempt'e	.....	103.5	101	102.2	101.5	102.2	103	103.6	102.3	102.5	101	.....	.....	.....
48	Male	Pulse	110	80	84	80	80	72	68	.....	.....	.....	.....	.....	.....	.....
	Age 38	Tempt'e	104	103.5	100.7	102.5	99.2	98.5	98.2	.....	.....	.....	.....	.....	.....	.....

No. 1 to 36, Recovered.

No. 37, death on 6th day—Hemorrhage from the bowels.

No. 38, Death on 5th day—Suppression of urine.

No. 39, Death on 5th day—Suppression of urine.

No. 40, Death on 3d day—Suppression of urine.

No. 41, Died on 4th day—Suppression and black vomit.

No. 42, Death on 6th day—Black Vomit and Suppression.

No. 43, Death on 5th day—Intercurrent Congestive Malarial attack.

No. 44, Death on 3d day—Suppression and Black Vomit.

No. 45, Death on 3d day—Black Vomit.

No. 46, Death on 4th day—Suppression and Black Vomit.

No. 47, Death on 6th day—Suppression.

No, 48, Recovered,

ART. II.—ON SOME OF THE ACCIDENTS OF PARTURITION REQUIRING SURGICAL TREATMENT. By MONTROSE A. PALLEN, M. D., Late Professor of Anatomy in the Missouri Medical College; Surgeon to the Gynæcological Department of St. Luke's Hospital; Consulting Surgeon to the Gynæcological Institute of the Sisters of Mercy, etc., etc., St. Louis, Mo.

Parturient accidents demanding operative procedure are uterine, cervical, vaginal, vesico-vaginal, vulvar, recto-vaginal, vagino-perineal, recto-perineal, and perineal. The consideration of vesico-vaginal and recto-vaginal lesions will not be entered into here, because little, if anything, can be added to what is already known. Rupture of the uterus may likewise be dismissed, with the additional remark that if the fœtus escape into the abdominal cavity, that gastrotomy should be performed according to the rules so well established. The inocuousness of silver wire sutures is so well known, that I would not hesitate to apply them to a large rent in the walls of the uterus. The same may equally apply to the closure of the incision made in uterus for Cæsarian section.

Lesions of the Cervix.—In rapid labors resulting from very active uterine contractions, or from ergotism, or from unskillful instrumentation, the fœtal head may be driven or dropped through the external (and sometimes the internal) os, where sufficient dilation had not taken place, and a laceration ensues which frequently is productive of no more harm than a slight hæmorrhage and some subsequent surgical fever, sometimes mistaken for puerperal metritis. Should the laceration, however, extend as far as the vaginal junction or above it, serious and someties fatal hæmorrhage ensues, as I once witnessed in a case eight hours after an accoucheur had delivered by means of the forceps. We can readily understand the danger of hæmorrhage after such an accident, if we but recall the observations of Rouget, Traer, and Kobelt. In the non-parturient woman, the arterial and venous plexuses communicate freely and form a very rich vascular net-work. During menstruation the generative circle is much engorged and erected. During preg-

nancy the veins increase in size and numbers, and are loaded with great quantities of blood, and the physiological causes for this condition need not be here discussed. The anatomical points, however, should be observed. The arterial distribution to the body and neck of the uterus comes from the aorta through the utero-ovarian, and from the hypogastric through the uterine. The veins of the body of the uterus are larger than those of the cervix, and unite toward either angle, where they emerge between the round ligament, the Fallopian tube, and the utero-ovarian ligament. They anastomose in plexuses, receiving the veins of the ovaries, and the Fallopian tubes, which unite to form the utero-ovarian or pampiniform plexus. On the right side of the uterus these vessels empty by one common trunk, the utero-ovarian vein, into the vena cava; that on the left side most frequently empties into the left renal vein, sometimes into the cava. The body of the uterus, vascularly considered, is an abdominal organ, receiving its blood from the aorta, and giving it back to the vena cava. The neck of the uterus, on the contrary, is pelvic, receiving and returning its blood by the hypogastric vessels, as it receives its arterial blood from the hypogastric or internal iliac, through the uterine, which anastomoses with the vaginal and the utero-ovarian. The veins are numerous and tortuous, converging into one (sometimes two) common trunk, the uterine, which passes downwards and outwards to empty into the hypogastric or internal iliac, with the trunk common to the gluteal and ischiatic veins. There is a very marked inter-communication between these plexuses, the uterine, cervico-uterine, vesico-vaginal, vaginal and the vestibular and clitoridal bulbs. From these facts, a deep laceration of the cervix may beget a serious hæmorrhage, on account of the numerous and large tributary arteries and veins.

Symptoms of Laceration of the Cervix.—Hæmorrhage is the chief symptom, but shock is apparent where the rent is of much importance; but, as this condition may ensue in many deliveries without cervical lesion, it must be considered only in connection with feeble and frequent pulse, coldness of extremities,

fainting, etc. No accoucheur would witness these phenomena without examining the hypogastrium of the patient; and, finding the uterine globe firm and well contracted, he might be at a loss to account for them until he made further examination of the pudenda, when he would discover a very considerable quantity of blood upon the bed and the vagina filled with clots. Unless he suspects the cause of the loss of blood, he might order opium and stimuli, enjoining quiet, hoping the mischief had all been done. While he waits in hope, the patient bleeds, and may die. Therefore, instead of waiting, it would be proper to explore and see if the perineum, rectum, vagina, or vulva were lacerated; any of which accidents might give rise to serious losses of blood; and, failing to find these lesions, but discovering that the vagina gave issue to much blood, notwithstanding it was filled with clots, the finger passed to the cervix would easily recognize the laceration. Clearly, the blood must come from some point below the body of the uterus, which is firm and well contracted; it does not well forth from a lacerated perineum, rectum, vagina, or vestibule, therefore it can not come elsewhere than from a lacerated cervix, even if the touch be not sufficiently educated to recognize it.

Treatment.—The treatment is immediate when the hæmorrhage is profuse, and it requires a tampon, local application of the sesquichloride or persulphate of iron, or coäptation with sutures. If the accoucheur has not the preparations of iron or the silver sutures in readiness, he then might apply the tampon, AND THIS IS THE ONLY FORM OF POST-PARTUM HÆMORRHAGE WHERE SUCH TREATMENT IS APPLICABLE. The clots should be turned out, and a large sponge, sufficient to emesh itself in the womb, wrung out in alum-water, should be applied, and the vagina packed to the external orifice with wads of cotton. The disadvantages of this treatment are, that the production of styptic mechanical thrombosis of the vessels is apt to be followed by suppuration and pyæmic fever. The urine must be drawn off regularly every five or six hours, because the urethra is compressed by the tampon which fills the vagina to its utmost

capacity. The styptic tampons ought not to be interfered with for several days, and as a consequence, the decomposition of the lochial discharge begets a most offensive odor. After suppuration has been established, the tampon wads should be removed and the parts syringed every few hours with tepid water, followed by a solution of permanganate of potash, ten grains to the ounce. Frequent trials of bisulphate of soda, Labarraque's solution, bromo chloralum, carbolic acid, and permanganate of potash have decided me to rely upon the last named as the best disinfectant in use. I feel confident that its persistent use has saved many patients from septic troubles in all kinds of operations or injuries followed by suppuration.

Coäptation with silver sutures, when practicable, is the best form of treatment, because it will, in all probability, prevent suppuration and ultimate cervical ulcerated fissure. The coäptation consists in stitching the rents, as accurately as possible, with the silver sutures, and first suggested itself in a case of a lady, a brother of whom had died from epistaxis, and who had, herself, on two occasions, been very much prostrated from the same cause.

I saw this patient very soon after her delivery, which presented nothing unusual as far as the mechanism of labor was concerned, but a persistent hæmorrhage ensued, which was telling upon her strength. The tampon and styptic sponges were tried, but to no avail. The hæmorrhage persisted to such a degree that it was imminent. With the consent of the accoucheur in charge, I placed her in the left lateral semi-prone position and introduced a Sim's speculum, cleansed the wound as much as possible, and found a rent on the left posterior margin of the oval disc, extending upwards and backwards on a line with the sacro-iliac synchondrosis, a little less than two inches in extent. Five silver sutures were passed from above downwards (the third one very deeply through the tissue of the cervix alone, the others above having embraced the fornix of the vagina, the lowest two more superficially), and the parts were accurately coäpted. The bleeding ceased instantly, and the pa-

tient made a good recovery. The sutures were removed on the twelfth day, the two lowest ones having cut their way through the tissue of the cervix which was thin and distended. Permanganate of potash douches were used as precautionary measures against the septic influence of the lochial discharge. In one other case the like treatment by sutures was made with equal success.

Whatever form of laceration the cervix may undergo, coäptation evidently tends to the best results, either immediate or subsequent. Laceration of the cervix uteri during labor is a much more frequent accident than is generally supposed.

Many cases present themselves to the gynæcologist complicated with laceration of the perineum. We can readily understand how the perineum is ruptured on such an occasion, as the sudden giving away of the cervix uteri permits the head to press upon it before distension by the sweep of the occiput, and the strong expulsive efforts of the uterus continuing, it frequently gives way under such powerful forces.

If, after treatment of lacerated cervix by the method of coäptation, union should not have taken place, the patient finds herself with a fissure of the cervix, which rarely, if ever unites. In many instances retroversion takes place in consequence of the loss of symmetrical sustentative power, induced by relaxation or even rupture of the utero-sacro-lumbar ligaments. I have seen such retroversions rectified after an operation, reparative of the solution of continuity. Many of the cases reported by the older writers on uterine diseases, such as Bennet, Ashwell, Meigs, Lisfranc, and Jobert de Lamballe as ulceration with enlargement of the cervix, were evidently fissures covered with (papillary hypertrophy) granular erosion, and which were not recognized by examination with the old-fashioned tubular speculum. One can, therefore, readily imagine the difficulties encountered; and the numerous trials which beset the earlier gynæcologists who attempted to "melt down" hypertrophy, and who succeeded only when a large portion of the intra-vaginal portion of the cervix had sloughed away. By

means of the Sims' speculum, or any of its modifications in the shape of a perineal retractor, together with a couple of tenacula, there is no trouble whatever to diagnose fissured cervix by simply drawing the irregular and jagged edges together. These cases may be temporarily benefitted by the usual treatment, but the constant friction of the parts begets a new attack in the course of a few months. It may be safely stated that a cure without surgical procedure is so rare that it should never be anticipated, and the converse holds true, that an operation rarely, if ever, fails to bring about a complete restoration of the integrity of the cervix, as well as an amelioration and cure of the patient. The operative procedure here is quite simple: it consists of complete denudation of the cicatricial and ulcerated (papillary hypertrophy) margins, and their approximation (as in hare-lip), and retention by means of silver sutures. Annealed iron wire is possibly as good. The difficulties of the operation consist in thoroughly freshening the edges about the upper angle of the fissure, but to accomplish this the surgeon must be provided with scissors and cutting pliers of all shapes, so that the most tortuous and sinuous track may be reached. The passing of the needles is somewhat troublesome, as the tissue of the cervix is dense and tough, and the space for action quite limited. Short, stout and straight needles, not more than five eighths or three-quarters of an inch in length, trocar-pointed, are passed very easily. These needles should be armed with a loop of fine strong silk thread, not waxed, and without any knot, to which is attached a tapered silver wire. As many sutures are passed as the surgeon may think proper, but certainly one to every three lines of surface denudation. It may not be amiss, whilst speaking of needles, to mention that the very finest cambric needles, cut short, and pointed like a trocar, together with the fine, non-knotted loop of silk, and the tapered wire, have done very much towards simplifying the modus operandi of vesico-vaginal operations, from the fact, that the main portion of the wire is larger than the needle and thread, and fills the puncture so exactly, that no urine can dribble through.

Vaginal Accidents.—The vagina taken in totality may be said to be a tubular sheath, a segment of an ellipse, the posterior wall of which is the longer, whilst the anterior is the straighter.

It is surrounded by a plexus of blood vessels analogous to the bulb of the male, which likewise partake of erectility. Upon the circumferential periphery of the whole canal, these vessels ramify in net-works known as the vaginal plexuses, and at the pudendal extremity on each side of the ostium externum, they are collected into symmetrical leech-shaped masses known as the vaginal bulb, which communicates by means of several large vessels with the clitoridal bulb above, and with the internal pudic and external hæmorrhoidal veins below. Around the meatus urinarius, these vessels are collected in a contiguous mass, known as the periurethral plexus.

Cases occur during parturition, where, from enormous distention produced by a very large head, the fibres of the vaginal mucous membrane are torn asunder and the laceration extends into some one of the plexuses above mentioned, inducing a smart hæmorrhage. That a woman would bleed to death from such a cause I would not like to maintain, but in a constitution enfeebled from phthisis pulmonalis, heart, liver, or kidney trouble, any considerable loss of blood might seriously complicate the result. I have seen one case, where the hæmorrhage from a laceration of the vestibular portion of the vaginal canal was quite alarming, and which was only checked by the application of three silk sutures, not having silver wire with me. In this case the perineum was also ruptured as far as the bowel. The head was very large, the measurements of which unfortunately have been lost, but the child, a male, weighed something over sixteen pounds, and the mother was a *petite* woman, weighing hardly more than ninety pounds. In this instance the perineum was stitched with silk sutures.

Both lacerations healed kindly, and the accoucheur in charge removed the stitches from the vestibular rent on the fifth day, and permitted them to cut their way out from the perineal wound.

Thrombus of the vagina, or of the vulva, is an accident sometimes met with, and quite a number of fatal cases are recorded by Macbride, Phillipart, Stendel, Nægelé, Kleinert, Schedel, Burns, Dewees, Davis, Campbell, Capuron and others. Populus collected accounts of twenty-two cases, of which twelve were fatal from the hæmorrhage. Subsequent suppuration inducing pyæmia, or septicæmia, or exhaustion, or secondary hæmorrhage, has proved fatal in a number of cases.

During parturition the contractile efforts of the uterus and the abdominal muscles prevent the free return of blood from the ascending vena cava, and as a consequence, gorge the hypogastric veins, which in turn clog the vessels which empty therein, and if any violence be done them, a blood effusion takes place, and its seat determines the character of the thrombus. Intra and subperitoneal hematocele may ensue if it takes place in the connective peritoneal tissues; if the effusion be developed in or near the dartoic sac, extending sometimes from the mons veneris to the superficial perineal fascia, it may even involve both labia.

According to Klob, "puerperal thromboses are formed in the venous system, especially the utero-vaginal plexus, the origin of the hypogastric and internal spermatic vein (pampiniform plexus) either as a primary or secondary thrombosis. Primary thromboses are either continuances of those at the seat of the placenta or they are developed from compression, dilatation or marasmus." These pathological facts explain the formation of labial or vagino-vulvar thrombus, and may result from compression of the common or external iliac and hypogastric veins during labor, in consequence of the pressure of the fœtal head (first pointed out by Velpeau), or it may ensue in consequence of dilatation in the pampiniform and utero-vaginal plexuses. Whatever condition exists, either of compression or dilatation, the surgeon or accoucheur may be unexpectedly called upon to treat it.

The appearance of a thrombus may be unnoticed by the patient until it assumes such a size that the discomfort or pain

produced by its pressure upon the surrounding organs attracts her attention. Usually, however, the first manifestation of thrombus upon the part of the patient, is indicated by sharp or even excruciating pain. The non-painful thrombus most frequently is of less rapid formation, and takes place prior to delivery, or even of engagement of the head in the excavation; whereas, the other occurs just at the time of the emergence of the head from the outlet or subsequent to it. In either form, if the quantity of blood be large, if the distension of the mucous membrane be great, and particularly if the perineum be much involved, the thrombus will present a considerable obstacle to the delivery of the child, and at the same time be productive of more or less violent pain in consequence of pressure upon the surrounding structures. The most painful seat is in the perineum, because the resistance in this structure is greater than in the labia, and also on account of its proximity to the rectum.

Thrombi of a certain size may be absorbed after delivery, but it is a question of doubtful propriety to anticipate such a result. The whole question of phlebitis, periphlebitis, septic, or suppurative fever, disintegration and liquefaction of the clots, embolism, and metastatic abscess might be considered at this point, but they are foreign to the question at issue. The surgeon, however, must be guided by his judgment. I offer my views simply because they have stood the test of clinical experience. In the vast majority of cases, rupture of the sac takes place when the fœtal head presses upon it. Unless the accoucheur anticipates the danger of such an accident by incising it, (best on the exterior or cutaneous surface, because it is easiest dressed and free from lochial discharge,) and turning out the clots. I have seen a thrombus ruptured where the rent extended from the insertion of round ligament in the left labium to the superficial perineal aponeurosis, about five inches in length, and which was followed by the loss of at least a quart of blood. It was, fortunately, controlled by stuffing the sac with wads of linen rags and charpie, and keeping up equa-

ble compression by means of a spica bandage. Suppuration and fever ensued; but quinia and iron internally and permanganate of potash locally controlled them. The patient made a good recovery, but the edges of the rupture had to be united by vivification and silver sutures before she was completely free from inconvenience.

When a thrombus ruptures before or at the time when the head engages, the danger is greater than when it emerges, because the compression exercised at this period is wanting, and the blood will sometimes well forth in spite of all efforts to control it. After delivery we can more readily master the situation, because the factors of uterine contraction, muscular efforts, and pelvic obstructions are absent, and quiescence on the part of the patient can be obtained. The care to be bestowed upon a patient under these circumstances should undoubtedly be of the most important and unremitting character. The question of treatment is of primary importance. The late Professor Meigs advised the opening of the labial sac as soon as a large thrombus makes its appearance. I agree with him as far as treatment is concerned, but I can not accept his views entirely regarding its production: "That during the great distention and strain to which the genitals are exposed during parturition, a branch of the ishiatic or pudic artery, or bulb of the vestibule, may be ruptured." If the effusion of blood is due to an arterial rupture, I hardly think it would be safe to open the sac; a treatment hitherto attended with good results. Therefore, it seems, (as a consequence of such treatment—viz., incision and turning out of the clots,) to be entirely dependent upon a venous rupture in consequence of an obstruction above.

The division of the sac and the turning out of the clots, with the application of cold or some styptic, usually controls the hæmorrhage in small thrombi; but in the larger ones, it becomes a matter of serious consideration. Stuffing the sac with sponge, wads of cotton, lint, charpie, etc., soaked and wrung out in a solution of neutral sesquichloride or persulphate of iron, with compression by means of a spica bandage, may ar-

rest the bleeding; but failing to accomplish the result by this method, the actual cautery has been recommended. Circumstances might arise where such formidable treatment is necessary, but I am disposed to think that *percutaneous ligation en masse* would better answer the purpose. Of this operation, however, I have no practical experience, having made it only on the cadaver. The procedure consists in passing a ligature by the shoemaker's stitch from above the insertion of the round ligament deep behind the neck of the dartoic sac, through into the vagina so as to embrace the entire labium as far as the perineal superficial aponeurosis, keeping close to the descending ramus of the pubis. We thus get behind the principal network of veins and embrace the anterior and posterior folds of the dartoic sac. Labial thrombus has been mistaken for hernia, but systematic writers on obstetrics have pointed out its proper diagnosis.

Vagino-perineal, Perineo-rectal, and *Perineal Lacerations* are the most frequent lesions in parturient females, and they give rise, not only to immediate hæmorrhage (sometimes grave), but the future comfort and health of the patient is materially involved. To such accidents the gynæcologist often traces subsequent trouble, which taxes his ingenuity to the utmost. I have never seen a patient with perineal laceration who did not have retroversion of the uterus, although statements have been made to the contrary. I have also seen many cases of rectocele, cystocele, and procidentia uteri, either singly or combined, resulting from laceration of the perineum, and two of these had a fissure of such magnitude that the whole vulva and rectal outlets were converted into one cloaca, from which issued intestinal gases and fæcal matter of the most irritating nature. A consideration of the rôle played during delivery, together with the anatomical construction of the perineum, is worthy of the most careful study. Rupture of the perineum takes place by splitting from the fourchette and mucous membrane; or, in consequence of a direct sundering of the fibro-cellular attachments of the muscles which go to make up the entirety

of the structure. The first of these conditions is produced by the occipital sweep at the time of the emergence of the head, whereas the second takes place when the expulsive force acts somewhat in a direct line, in the first stage of the occiput's rolling under the pubic arch. Very frequently the shoulders rupture the perineum after the emergence of the head, without the production of the accident.

When labor progresses to a favorable termination, at the last parturient efforts the entire vulva undergoes *procession*, a term I use in contradistinction to *retrocession* as applied to the coccyx. This vulvar procession is made at the expense of the labia, which are flattened and adapted to the fœtal head, completely encapsulating it, the inferior wall of the capsule being composed of the perineum and inferior curvature of the rectum. As a consequence, the levatores ani are stretched laterally, circumferentially, and longitudinally, the transverse perinei distended to the utmost, the constrictor of the vagina rolled out, the ischio-cavernus flattened under the descending rami of the pubes, and the sphincter ani squeezed and compressed from behind forwards, and from above downwards. These various actions of the muscles necessarily strain the central conjunction of the recto-vaginal septum, where the perineal formation is located. This muscular conjunction is described by some excellent anatomists as the *perineal body*. If a vertical section of the female pelvis be made through the median line, from under the symphysis pubis to the sacrum, we observe that the vagina, vulva, and rectum are equally divided, and that the base line of the inferior portion corresponds with the raphé of the perineum, and that the vagina and rectum are in apposition for about an inch and three-quarters toward the upper portion of the section, and that the septum between them commences to become greater as we descend, more than an inch in a right line, nearly two inches on the curvature, the posterior margin being larger than the anterior, in consequence of the rectum making a double curve. When we reach the base of the section, we find that the vaginal and rectal mucous mem-

branes are almost an inch and three-quarters distant from each other. The average-sized woman being taken as the standard. It follows, therefore, that the lower portion of the septum, the perineum proper, is somewhat triangular, almost pyramidal in consequence of the conjunction of the muscles and aponeuroses which govern and control the vulvar and rectal apparatus.

An anatomical survey of the structures indicates that the perineum is triplicate: First, the aponeurotic and muscular pyramid, properly the perineal body; second, the vagino-perineum, or the base, composed of the fourchette, skin, and superficial aponeurosis; third, the recto-perineum from the anterior margin of the anal opening to the coccyx. Any one of these portions may be lacerated during labor, or all of them. Although the last mentioned subdivision is rarely injured, yet cases are reported by Sédillot, Goutouly, Roux, Moreau, and others.

Before considering the ruptures of any one or all of these perineal subdivisions, it may be stated that the efforts of obstetricians to prevent the accident have hitherto been nugatory; and that, in the majority of women where it does take place, they will ever fail to prevent it. There are causes, either accidental or predisposing, which conspire to render futile all artificial means to save the integrity of the parts. When this condition of affairs exists, I have not hesitated to make one or two liberating incisions, obliquely upwards and outwards, about two-thirds of an inch in length, immediately between the fossa navicularis and the fourchette. We thus get an incision or laceration which saves the base and recto-perineal spaces, and which are sure to heal by granulations, if the adhesive union should not follow the application of silver sutures.

What are the conditions, accidental or predisposing which render nugatory the efforts of the obstetrician to prevent a perineal laceration? The causes are: First, laceration of the cervix, whereby the fœtal head enters the laceration suddenly and rapidly, and drives through the perineum before it has been sufficiently distended, either by the amniotic bag or

by the rise and fall of the head itself during the uterine contractions, or pending their intermissions. Second, unskillful instrumentation. The forceps may be said to protect the perineum if the accoucheur follows the axioms of Blundell "*arte non vi*" and "*cave perineo*," when none of the predisposing causes exist; but should they be found present, fortunate is the woman if she escape. I do not wish to be understood as saying that a laceration will necessarily ensue. I merely state that it is to be apprehended, and the accoucheur may prevent it by extraordinary skill on his part and extreme quiescence on the part of the patient, which often can not be obtained, save under the influence of chloroform or ether. Third, an unusually large fœtal head, and in primiparæ, not unfrequently complicated with a small vagina and vulva. Fourth, excessive deposit of adipose tissue or spastic muscular contraction, or both combined. Fifth, ulceration of the fourchette (most frequently syphilitic) or disease of the recto-vaginal septum, from hæmorrhoidal, syphilitic, or cancerous trouble. Incurable in the last mentioned affection, doubtful in the second, but worthy of an effort at restitution in the first.

The predisposing causes are either vulvar or pelvic, and when added to certain fœtal positions, become active elements in the production of the accident. Vulvar predispositions frequently depend upon age. A woman may be too young, in the nonnubile condition, or she may be too old: in the former state the tissues are not sufficiently developed, and the perineal structures are too thin and feeble, whilst in the latter state they are defective as regards elasticity and distensibility. The vagina may be too short and narrow, and the perineal base unduly lengthened, in which condition the capsule of procession is formed at the expense of the perineum, which fits closely upon the head, and being the only resistant to the uterine forces, is not strong enough to deflect the head to a curve parallel with the extended vaginal outlet. It therefore gives way and laceration ensues.

In cases of this character, when the fœtal head or shoulders are above the average size, and the labor active, and even if

forceps be used, the accoucheur may consider himself as particularly fortunate if his patient escape with a laceration of the pre-anal perineum. The mechanism of such perineal lacerations depends upon too rapid extension of the fœtal head in occipito-anterior positions, or too little or insufficient rotation in occipito-posterior positions. Face presentations are even more liable to produce lacerations under these circumstances. Pelvic predispositions are, prominence of the sacro-vertebral angle—elongation of the pubic symphysis and consequent narrowing of the arch—too great or defective sacral curvature, or, what is most frequent, a maximum of space in the excavation, which gives more than sufficient room to the fœtal head, and therefore offers not enough resistance to the engagement, and permits its impinging too soon upon the perineum. In the last subdivision, laceration ensues from rapid and energetic uterine contractions; in the three others, the accident is more likely to depend upon the stoppage of the head at the perineum, the uterine forces not acting sufficiently strong to overcome the irregularities of transit (caused by the osseous departures from the normal pelvic planes) but sufficient to drive the head through the perineum if any of the vulvar predispositions exist, conditions most usually occurring.

Symptoms of Perineal Laceration.—The sudden extrusion of the fœtal head, accompanied by sharp pains, should lead the accoucheur, at least to suspect a laceration of the structures, partially or in entirety. *A careful examination of the vulva after delivery is the duty of every obstetrician.* The observance of this rule permits one immediately to recognize the accident if it takes place, and to feel satisfied that he has taken due precaution in the matter, if no trouble has occurred. Slight fourchette ruptures pass unnoticed by the patient, and frequently by the obstetrician, and sometimes heal of themselves. This spontaneous healing so seldom occurs, that when it takes place it is heralded as a triumph of nature. We never hear of the unrecognized or the uncured cases.

The symptoms of this form of laceration are objectively man-

ifest; when the finger is drawn from the locality of the fourchette to the rectum and no perineal septum is found. Ocular inspection reveals a raw shreddy mass, irregular and bloody upon its surface. Laceration involving the sphincter ani is absolutely without prospect of spontaneous cure, and the patient presents the symptoms of the other condition, but in an exaggerated degree. The vagina becomes a common cloaca, and is the receptacle of the rectal and its own discharges, rendering the woman an object of disgust to herself and friends; and she becomes melancholy, despairing, and self-loathing, and her health succumbs under the combined mental and physical afflictions. No wonder that Roux was enthusiastic when he overcame such unmanageable troubles.

The treatment of lacerated perineum is *immediate* or *subsequent*. That is, as soon after the accident as practicable, when the edges of the wound are yet raw and bloody, or after a certain period has elapsed, when the margins have become cicatrized and retracted. Some surgeons have advised an intermediate period of operating before cicatrization, after the granulation process is commenced, among whom may be cited Velpeau, Nélaton and Maisonneuve. The last-named surgeon reported three successful cases of intermediate operation (on the eleventh or twelfth day of the accident), to the "Societé de Chirurgie" of Paris in 1849.

To Guillemeau, the pupil and rival of Ambroise Paré, belongs the honor of being the first to practice perineoraphy, and his first operation was a success, and he operated by freshening the edges of the old cicatrices, and kept them in apposition by means of interrupted sutures. This operation was a great triumph, if we recollect that it took place some three hundred years ago, when amputated limbs were put in burning pitch and oil to stop the arterial hæmorrhage. Afterwards, Mauriceau and Lamotte, in France, and Smelle, in England, advised the same operation, and even described it, but we have no data upon which to base the statement that they ever performed it, and until the close of the last century, the procedure

seems to have been lost and forgotten, until it was taken up and somewhat popularized by Noel of Rheims, and Lancerotte of Lunéville, two French surgeons who obtained considerable reputation for their success in perineoraphy. They both followed Guillemeau's method of vivification, but Noel used the compound hare-lip suture (en tortillée) whilst Lancerotte employed the suture à surget, a combination of straight and oblique, making a series of Z-shaped stitches.

In the beginning of the present century Antoine Dubois, the accoucheur of Marie Louise, the wife of Napoleon I., made one effort towards perineoraphy, but he failed. Some years after, Paul Dubois, his son, made one operation, but like his illustrious sire, he too was doomed to disappointment. He failed as a perineoraphist, but delivered the Empress Eugenie of the Prince Imperial.

In Germany, Mursinna, Mentzel, and Osiander, in the second and third decennia of this century, made efforts, sometimes successful, towards the restoration of the perineum—their attempts did not amount to much. Dieffenbach, in Berlin, had two successful cases of perineal rupture, and seems to have accomplished his results in consequence of the liberating incisions on the sides of the vulva and perineum. These surgeons had all operated prior to 1831, when Roux, the brilliant and eccentric, flashed his bistoury across the field of surgery, and waved his emblazoned banner of "chirurgie reparatrice" from the heights. In these days men are not hero-worshippers, particularly in a science like medicine, but forty years ago Paris was the centre of polite and scientific learning, and the medical profession stood amongst the first ranks actually, and in the estimation of the community. Philibert Joseph Roux was confessedly at the head of French surgery, having but one rival, the great Dupuytren, and the profession partook of his enthusiasm when he announced "un premier pas assuré vers une conquête aurable."

The method of Roux will be described farther on. After Roux's labors became known, and his procedures recognized,

numerous others in France followed up his successes, the most distinguished of whom were Velpeau, Mercier (who first proposed the division of the sphincter ani in 1839). Huguier, Nélaton, Danyau, Depaul, Demarquay, Chassaignac, Verneuil, Maisonneuve, Deroubaix and Courty. In Germany, Dieffenbach, Langenbeck, Scanzoni, Simon of Heidelberg, and Braun of Vienna have operated frequently and successfully. In Great Britain, no one save Baker-Brown and perhaps Graily Hewitt, have made any great strides in this department of plastic surgery. In the United States, Mettauer, of Virginia, paved the way, not only as a perineoraphist, but as the expounder, if not the introducer of metallic sutures (principally lead) in surgery. Unfortunately for science, this distinguished and ingenious surgeon did not live in a section of country where opportunities presented themselves whereby he could extend the field of his labors; but as the pioneer in this line, he is entitled to more credit than has been accorded to him. Unlike J. Marion Sims, he lacked the energy to make opportunity for himself, wherefore medicine has lost some of the rich heritage which his more brilliant and fortunate successor has bestowed upon humanity by popularizing silver sutures. To resume, in the United States, Sims, Thomas, Bozeman, Emmet, Agnew, Nott, Horatio Storer and others have made hundreds of plastic operations upon the perineum equally brilliant, and possibly with more success than have our European confrères. American operative surgery loses nothing in comparison with European, and whilst we may be somewhat behind the Old World in our knowledge of morbid anatomy and the microscope, yet as practitioners of surgery in all of its varied branches or departments, we are not their inferiors. In gynæcology, practically the Americans take the lead, the array of names above mentioned are vouchers for the statements herein reported.

When perineal laceration takes place, the question arises, shall we operate or leave the issue to nature? Many high authorities protested against operating immediately, but the weight of authority seems to incline in favor of immediate surgical inter-

ference, unless, as Prof. T. Gaillard Thomas says, "the sphincter ani and recto-vaginal wall be implicated in the laceration to such an extent as to make the operation a serious and lengthy one." Even under these circumstances, I would favor immediate interference, as I know of one such case treated in this wise by Prof. Maughs, of St. Louis, in which there was a recovery, notwithstanding the whole of the recto-vaginal septum was lacerated almost as high as the Douglas *cul de-sac*.

Danyau, the pupil and friend of Roux, was the first to advocate immediate treatment. He says: "If we act immediately after delivery, we do not perform a bloody operation, we simply apply a dressing. The parts, naturally swollen, are in the best possible condition for exact juxtaposition; the lochia will flow, it is true, but they do not touch the wounded surfaces, provided the sutures have been well applied. Moreover, do we not see wounds in the vagina, gangrene, or incomplete ruptures heal, notwithstanding the lochial discharge? Finally, the woman utilizes her time of quiescence necessitated by the labor, as the immobility favors union."

Graily Hewitt says "the best treatment in a case of ruptured perineum is to deal with the rent immediately; that is, within an hour after its occurrence. By means of a curved needle and some fine silver wire, two or three or more interrupted sutures are applied, taking care that they pass across quite at the bottom of the wound, and the torn parts are thus brought together. In three days they are removed. Complete quiescence and constipation of the bowels are requisite for a week. The parts will occasionally heal without the sutures, but this can not be depended upon. There is little or no pain attending this little operation if it be done directly, and the result is, as I can say from experience of several cases, most satisfactory. Every hour after the labor diminishes the chance of union by the first intention."

Scanzoni says "the operation should be performed just after delivery, because it is more likely that the bleeding lips of the wound will then unite, and because, vivification of the edges

not being necessary, the procedure is simple and less dangerous."

Prof. T. G. Thomas states that "the worst cases of the accident with which we meet generally follow instrumental or manual delivery, and when the discovery of its occurrence is made, the patient will usually be in a profound anæsthetic sleep. Every operator should be prepared, under such circumstances, to attempt repair; for, if it succeeds, the patient will be saved much suffering, while failure will not, in any wise, depreciate her condition. I have, in a number of instances, resorted to immediate operation, and the result of my experience leads me always to adopt it, unless," etc., etc., as quoted above.

To the testimonies of these eminent authorities I would add my own experience, which comprises thirteen cases, of which twelve were successful. One died on the fourteenth day of embolism, and a post-mortem examination showed a perfect union in this period of time. The thirteenth case operated on had a laceration to the sphincter ani, following a forceps delivery, and I was called in consultation a few hours afterwards, when the rent was stitched accurately, and four silver sutures used. Death ensued on the seventh day (cause not made out and no autopsy allowed), and there was no union whatever. Of the other cases, eleven in number, they embraced various forms of laceration of the base of the perineum, from a rent beyond the fourchette (to such as Dubois, Depaul, and Danyau applied the *serres-fines*) to a complete severance of the sphincter ani. In one of the cases nine silver sutures were used, four passed from the rectum and twisted upon the posterior wall and within the vagina, and five through the perineum, almost at right angles to the others. In all the cases the urine was either drawn regularly every six hours, or a permanent catheter used. The vagina was syringed every four or five hours with tepid water and permanganate of potash douches. Another very great advantage to the patient, and a very great comfort too, particularly when the legs are kept bandaged together, is the use of the air-cushion or water-bag under the buttocks. This keeps

the nates in apposition and very much facilitates catherization. The circular or horseshoe-shaped bag is the best; the latter is easily formed from the former by constricting a segment of the circle with a strong cord, which keeps out the air or water.

If, after immediate operation, union does not take place, or if the patient is left to the reparative processes of nature, and the laceration persists, we find several conditions requiring surgical skill for a restoration of the integrity of the parts. A choice of procedure is not a matter of indifference, as the character of the rent may have induced certain changes in the vagina, bladder, or rectum, or any two of them, or all of them, a non-rectification of which might materially affect the issue. We should always remember that no operation for laceration of the perineum should be undertaken without first examining the uterus with regard to its position, or to the integrity of the cervix; the rectification of these conditions being equally important.

If a cystocele or a rectocele exist, or both, the necessary remedial procedures should be instigated, a consideration of which does not legitimately belong here, as they are conditions secondary to the perineal rupture.

If the perineal laceration be operated upon and a success follow, one of the objects of the operation would be lost if we omitted to first remedy the cystocele or rectocele. When a retroversion of the uterus exists, proper reposition of that organ may sometimes be all that is necessary, after the integrity of the perineum is restored, but usually a properly adjusted pessary is requisite before the malposition is rectified; a condition which could not be obtained before a successful operation, as the sinking of the posterior wall of the vagina precluded the wearing of self-sustaining intra-vaginal pessaries. Experience has taught me that few, if any, of the contrivances known as supporters, are worth anything toward a rectification of malposition of the uterus, particularly if their object be a suspension of this organ by means of extra vaginal straps or pads, if

the causation of the uterine malposition be permitted to remain after the introduction of a pessary.

It being determined that an operation for rupture of the perineum is requisite, what are the procedures? The restoration of a symmetrical action of the muscles entering into the formation is the object sought to be obtained; and whilst we can never hope for complete muscular action from an artificial perineum, yet, under some circumstances, we can get a much stronger one than before the accident.

Restoration of the pre-anal perineum consists in nothing more or less than the continuation forwards of the divided posterior and inferior walls of the vaginal tube, which curves abruptly forward at its outlet for about an inch and a quarter inferiorly and posteriorly, and about three-fifths of an inch superiorly and anteriorly. From these anatomical data we can readily understand why cystocele is so frequently found to be present after a laceration of any portion of the perineum, on account of the shortening of the posterior vaginal space, and the subsequent deficiency of support under the anterior wall of the vagina at its connection with the bladder. The female bladder empties itself very rapidly, and is also capable of being enormously distended, and either condition will exert a baneful influence upon a relaxed connective cellular tissue; the former, by contraction of this tissue around the bladder, *from the vagina;* and the latter, by its distention upwards and relaxation *around and from the bladder.* These alternate contractions and relaxations beget a flabby condition of sustentative cellular tissue, which, coädded to the want of coördinate perineal support, leads to cystocele and rectocele; most frequently in the latter as a sequitur, if not as a consequence of the former.

The various procedures put into practice are all more or less based upon the operation as performed by Roux. It should be remembered that no operation should be performed if any traces of pelvic cellulitis exist, or if the patient be laboring under a dysentery or diarrhœa, or any disease of the heart,

liver, lungs, or kidneys, or if she be pregnant. Some of the French surgeons are averse to making perineoraphy even during lactation.

Method of Roux.—Applicable to all forms of rupture of the perineum, except central or post-anal perforation.

The first patient operated upon was the wife of a physician, who lived in Valognes, a small town in Normandy, France. The laceration was straight, bisecting the perineum, the anterior portion of the sphincter ani, as well as a portion of the recto-vaginal septum. The lady had, from the prolonged use of opium, habituated herself to days, or even weeks, constipation, as the discharge of fæcal matter per vaginam rendered the vulva sore and irritable. On account of this acquired quiescence of the bowel, Roux thought his patient in the best possible condition for the attempt; and, after making all necessary preparations, he operated in January, 1832, as follows: He placed his patient upon the table in the position for lithotomy in the male, and freshened the cicatricial surfaces of the rupture by removing from each side very thin quadrilateral flaps, about two inches long by three-quarters of an inch broad, and the dissection was carried well up on the labia and over the anal periphery, so that when the wound was closed, the vaginal entrance was rather narrower than in the normal condition. The first operation was completed by using the compound hare-lip suture, and was a failure; but the same patient was again operated upon in the latter part of May in the same year, and the operation was successful; in this effort Roux employed the quill suture. The subsequent treatment, prior to and after removing the ligatures (three deep ones and three superficial ones), consisted in catheterizing the bladder every few hours, so that no urine dribbled over the wound; the bowels were kept quiet by the use of opium; and the patient was constantly upon her left side with the legs and thighs in apposition by means of bandages. The sutures were removed on the seventh day, and on the twelfth the bowels were moved by means of an enema. The patient returned to Valognes by the end of June, about four

weeks after the operation, restored, with the exception of a very small fistulous communication between the vagina and rectum; and she gave birth to a child some fifteen months afterwards, without a rupture taking place again.

Method of Dieffenbach.—This consists of the same process of vivification of the surfaces as Roux's, but differs from it in the method of applying the sutures. The first suture, of strong well-waxed thread, is passed through the centre of the base of the perineum to the top of the angle on either side of the vaginal dissection, being nothing more or less than a sustaining interrupted suture. After this, two hare-lip pins are passed deeply above and in front of the main suture; two others, somewhat more superficial, are passed behind and below the main suture, a little in advance and upon the margin of the anus. If the rectum be involved, as many simple sutures are passed as may be requisite. Before the wound is closed by tightening the threads over the pins, liberating incisions are made on either side of the anus, about two inches in length, and semilunar in shape, with the convexity outwards.

Method of Langenbeck, or perineo-synthesis, consists of freshening the surfaces, as did the others above mentioned, and in folding or doubling the separated surfaces (instead of entirely removing them), so as to form the anterior side of the triangular space in the reconstructed perineum. The sutures and liberating incisions of Dieffenbach are used.

Method of Baker-Brown.—This is Roux's method co-added to Mercier's division of the sphincter-ani muscle.

Method of J. Marion Sims.—Vivification according to Roux, but the interrupted suture of silver wire is used. When the rectum is involved, the recto-vaginal septum is freshened and brought in apposition by means of silver sutures twisted in the vagina, and those in the perineum passed deeply, care being taken not to engage the two sets of wires, as they are introduced almost at right angles to each other. The external wires are twisted and cut long, and Thomas Addis Emmet brings them all together (fan-shaped), thus avoiding the ulcera-

tion in the skin which one or two displaced wires might produce.

Method of Hodgen.—This consists of uniting the base of a triangular or rather an irregular quadrangular dissection of the lacerated cicatricial surfaces, so that the raw surfaces look backward, and the flaps are united by a number of small sutures hid upon the vaginal surface (intestinal suture). The vivified surfaces are approximated as in the method of Sims. This is a most ingenious operation, difficult of performance, but beautiful in its results. I have made it three times successfully.

Resume of Procedures.—Sims' procedure is the easiest and quickest of performance. Hodgen's the most difficult by far, but leaving the perineum stronger than before the rupture, as the vaginal mucous membrane is doubled upon itself somewhat like Langenbeck's perineo-synthesis.

Silver wires are the best of sutures, and ought to be drawn through upon silk threads, which should be passed by means of curved trocar-pointed needles, care being taken that these should be passed in the connective tissue between the rectum and vagina. I have been in the habit of leaving the wires long and clamped with shot, which prevents their sticking into the skin.

The above-described lesions have hitherto been known under the generic term of perineal lacerations. I propose that they should be called vagino-perineal, perineo-rectal, and ano-perineal ruptures; the last named to apply to those very rare cases where the head passes through the bowel, leaving the fourchette and perineal raphé intact. Denman relates one such case, Danyau another, and Robert presented the history of another to the "Société de Chirurgie" of Paris in 1849, which he treated successfully by the interrupted suture.

Perineal Laceration proper is the most frequent (and as I understand it, never described), form of parturient lesion. It would be better to call this form of lesion a *perineal sundering*, either the result of defective muscular action in consequence of lesion

of the anterior and posterior superficial branches of the pudic nerve, involving atrophy and degeneration of muscular tissue; or, as a result of direct mechanical violence, which severs the union of the transverse perinei muscles from their attachments to the bulbo-cavernous in front, the sphincter ani behind and the levatores ani above and around, at the time of the emergence of the child. Whether this perineal sundering depends upon either of the above causes or both of them, can not be positively stated, as post-mortem examinations have not hitherto been reported with regard to this point. I have dissected only two perinei where the condition to be described existed. In both of these cases the transverse perinei muscles were very much atrophied, the muscular fibre being distinguished by the naked eye only at their origins on the tuberosities of the ischium, and the perineal body was a mass of fatty degenerate tissue, and shreds from the (transverse perinei) muscle were studded with oil globules. When the mucous membrane of the vagina and the skin of the base (perineal raphé) remain, and there is a sundering of the aponeuroses and muscles which conjoin to form the perineum proper, the posterior portion of the vagino-vulvar outlet becomes a thin patulous bag, without any sustentative power whatever, and is always accompanied with a greater or less amount of bladder (cystocele) or rectal (rectocele) prolapse; and, as above stated with regard to the other forms of perineal rupture, always coïncident with, if not productive of retroversion of the uterus.

That this form of lesion is common, can be readily understood when it may be stated that many cases of leucorrhœa depend upon the pouching produced by the rectum towards the coccyx, in consequence of the sphincter ani being detached in front from the transverse perinei, and which drags the vagina after it. These cases are relieved when the pouch is turned over forwards, by passing the finger in the rectum and repeatedly washing the sac with clean water, which can not be done by the ordinary irrigations or douches. The distance from the fourchette to the anterior margin of the anus in these conditions rarely exceeds the fourth of an inch.

In some of these cases a vivification of the posterior vagino-vulvar-perineal space, and approximation, as in the other operations, entirely cured the patient, not only of the leucorrhœa, but of the distressing dragging pain, etc., produced by the cysto-rectocele. The operation for the restoration of this concealed laceration or perineal sundering, consists in a denudation of the posterior-inferior vulvo-vaginal mucous membrane, leaving the skin intact and bringing the parts together with silver sutures.

The perineal structure is thereby reformed, as indicated by the increased length of the base, the distance from the fourchette to the anus being brought back to its original length, in the neighborhood of an inch and three-fourths, and the recto-vaginal septum once more becoming pyramidal or irregularly triangular, as in the normal condition. The same cares are requisite after an operation of this nature, as in the others. These concealed lacerations are the lesions encountered, wherein many physicians introduce those enormous pessaries found in the shops, which crowd or jam the walls of the bladder and rectum, after their application, and the reason assigned for the use of such anatomical monstrosities is, that a smaller instrument will not sustain the retroverted uterus. Of course not. The posterior fornix of the vagina and the Douglas space are obliterated; the rectum sinks upon the coccyx, and the posterior vaginal wall (already flabby on account of the loss of the perineal sustentative power) is dragged after it; and, as a consequence, there is nothing left upon which a pessary can rest.

We should remember that no pessary should be longer than the distance from the horizontal ramus of the pubis just above the arch to the posterior fornix of the vagina just below the Douglas space. In the average-sized woman this rarely exceeds two and a quarter inches. When a pessary is accommodated to this area, it will not impinge upon either the bladder or rectum, and it follows the vaginal transpositions coïncident with the rise and fall of the abdominal contents during respiration. A pessary of larger size keeps up hyperæmia of the vaginal mucous

membrane, induces leucorrhœa, vesical tenesmus, or dysuria, or may even prevent a discharge from the bladder or rectum. I have seen a largest sized Hodge pessary cause obstruction of the bowel to such a degree, that the patient had a constant mucus diarrhœa engendered by the mechanical rectal pressure (catarrhal rectitis from mechanical obstruction), and for which she had been treated for several weeks, but which persisted, the opiates, etc., to the contrary. The pessary was removed, a large mass of hard stercoraceous material was felt in and above the Douglas space (mistaken for a hæmatocele or recto-uterine fibroid), which was literally spooned out, and which more than filled a quart bucket. The bowel was washed out for some weeks with a weak solution of permanganate of potash, three grains to the ounce of water, and an operation (perineoraphy proper) made as above described. One month after the patient returned to her home, wearing a small-sized Smith pessary (as the retroversion of the uterus persisted) with a perfectly reconstructed perineum, the integrity of which had been destroyed by a concealed laceration.

ART. II.—GUN-SHOT WOUND OVER THE LEFT FRONTAL SINUS, FRACTURING THE CRANIUM; A FRAGMENT BEING DRIVEN THROUGH THE DURA MATER UPON THE BRAIN; FOLLOWED BY EPILEPSY; DEATH A WEEK AFTER TREPHINING. By PAUL F. EVE, M. D., Nashville, Tenn.

Mr. E., a member of General Forrest's cavalry, was shot at the attack on Brentwood, near this city, the 25th of March, 1863. The ball did not penetrate; struck just above the left superciliary ridge; but so severely injured him that he was left in the care of a private family. He was subsequently brought a prisoner into Nashville; then sent to New York; thence to Baltimore, down the Chesapeake bay, and finally reached Petersburg, Va.; where, being recognized by a friend, his family were notified of his condition. They soon obtained his discharge

from the Confederate service, and brought him home to Mississippi. When or where he had the first epileptic attack can not now be ascertained, since this whole period was to him a blank page in life's history.

After the return home of our patient, and the blessed influences of restored peace, he ventured, during this period of ten years, to enter into mercantile business in a country store with a partner, and even to marry. The epilepsy, however, became so persistent, and finally beginning to affect his mind, his family physician determined to ascertain what an operation promised in his case, and with that view brought him to this city. From this very imperfect account of the case in which I have been aided by his friend and physician, the inference is irresistible that Mr. E., when wounded, was so injured that the brain or its meninges became involved.

After due preparation, on the 7th of November last, assisted by Drs. Sauls, Buchanan, and others, the operation of trephining was performed. Two incisions were made through the scalp down upon the cranium; one extending horizontally outwards from about the median line just above the left supercilia, and the other commencing at the same point, extended upward to the hair upon the forehead. This flap dissected up, exposed an irregular depression of about three-quarters of an inch in depth in the centre. In attempting now to apply the longest crown of Gault's trephine, it was ascertained that the centre pin did not reach the depressed fractured bone, and the rotary movements of the circular saw had to be sustained and regulated, as best they could by the fingers of the left hand. The furrow having thus been cut, the motion ceased as soon as the crackling sound was heard announcing that the internal table of the os frontis was reached. The disk of bone seized by strong forceps was detached by a considerable effort, a spicula extending downwards toward the nose coming off with it, but adherent to the dura-mater, which still closely embraced its free nipple-like projection. With a knife laid as close as could be on the internal surface of the bone, the separation was care-

fully made. It was this necessary act in extracting the depressed fragment which undoubtedly gave rise to the grave complication by opening the dura-mater, costing thereby the patient's life.

It is highly probable that epistaxis occurred when the wound was inflicted; for, while no hæmorrhage took place during the operation, there was some bleeding from the left nostril, though slight, after it.

The projecting portion of the fractured cranium inseparable from the disk removed by the trephine, is rounded off as if by the absorbents, and is about the size of the end of a finger, though more flat and pointed. I regret that I can not accompany this description of the case with a cut for illustration.

The case did well, and for several days during the after-treatment promised to be successful; but in spite of every attention bestowed by relatives, friends, and physicians, proved fatal at the end of seven days, from inflammation of the cranial contents. Even down to a few hours before he died, it was thought that he would recover.

During the past three winters I have trephined once each course of lectures before the class, for fracture of cranium, once over the right lateral sinus, the one now detailed above terminated fatally.

ART. III.—A GUN-SHOT WOUND OF THE BRAIN. By H. A. SIMMONS, M. D., Saline County, Nebraska.

I was called, May 9th, 1872, to see Mr. Oscar Jacobson's boy, aged two years. I found him unconscious to all surrounding objects, with his eyes widely dilated and set, and unable to shut or move them. I found, from a history of the case, that he and his brother were out near the stable, and his brother seeing a pistol on the roof of the stable, climbed up, and taking the pistol in hand, presented it toward his brother's head, saying at the same time, "I will shoot you," not thinking that it

would go off, as his older brother had tried on various occasions before. His brother was sitting on the ground almost under the eaves of the stable, when the pistol unfortunately went off, the ball entering the centre of the frontal bone, or forehead, just below the edge of the hair, taking a bunch of the hair in with it that hung down over the forehead. I administered chloroform, though I do not know that it was necessary, as he was unconscious seemingly to all pain; and I found by introducing a silver probe that the ball had passed through the brain on a line with the fauces, and had lodged in the base of the skull. I could have taken the ball out, but to have done so I would have had to enlarge the opening in the frontal bone, as it was about the size of the round ball, which I thought had flattened when it struck the base of the skull and buried itself in the same. I therefore took out the hair that had been taken in with the ball, and with it about a teaspoonful of the brain that had become detached by the force of the ball. I used cold water dressing until the wound began to heal, and then used the resin cerate. I also used an enema each day to move his bowels.

His eyes remained fixed and open until the fourth day. He would only, when requested, shut or open his eyes for several days.

The wound soon healed, but his left arm and left leg were so paralyzed that he could not use them for some time. He has now recovered entirely, and is as smart as any boy of his age, a great many predictions to the contrary.

I have written the history of this case on account of the diversity of opinions among physicians and friends of the child; some claiming that the ball having passed through the intellectual part of the brain would destroy the mind to such an extent that the child would be an idiot; and hence it would be better to let him die than that such should be the case.

ART. IV.—ASCARIDES AND VEGETABLE FORMATIONS IN THE ALIMENTARY TRACK. By W. A. RAWLINGS, M. D., Huntsville, Walker County, Texas.

Julia White, mulatto, aged about thirty-five years; I was asked to visit in the early part of last spring, 1873; found her with fever, dry and hot skin, quick pulse, furred tongue, griping pains in the bowels. I gave her calomel and Dover's powder in divided parts. Six hours after taking the last portion, a dose of castor oil, with two drops spts. turpentine. I called the next day; the medicine had acted well; fever off, skin moist, pulse regular. Gave quinine, and discontinued my visits.

One month later I was called again to the woman; found her with all the symptoms as in the first attack; repeated the same treatment, with about the same result, except was informed by my patient that she noticed in her evacuations quite a number of small worms (ascarides), and that she thought they would account for her sickness. Upon this information I gave her the following—

℞—Ol. Chenopodii, Spts. Turpentine, aa ℥ii.;
Simple Syrup, ℥iv. M.

One teaspoonful every morning before meals, requesting that she notice her evacuations and procure some of the worms for my inspection. She did as directed, saying "she had discharged, daily, since taking the last medicine, a great number of just such as you see in the vial," which at the same time she handed me. In a short time the worms ceased to be seen, and my visits were again discontinued.

Two months later I was called again to this patient, finding her with all her old complaints; gave hyd. chlorid. mitis, grs. xii., divided into two parts, at intervals of two hours, to be followed six hours later with castor oil and ten drops spts. turpentine, which expelled from her bowels a number of *dead worms* of the same character as heretofore. Continued treatment, spts. turpentine, gtts. v. on a lump of sugar morning and night,

alternating every other day with tablespoonful of castor oil, ten drops spts. turpentine. In a few days the worms ceased to be discharged, and again my visits were discontinued.

December 28th.—After the lapse of several months, I was called again to this patient. On this occasion Julia exhibited a number of apparently, to the natural eye, *small vegetable roots*, bunched together in a detached formation, secured in a vial, saying, "Doctor, since the worms ceased to pass from me, I have been of late discharging from my bowels a number of *roots*, like these in the vial, which I have saved to show to you. They are strange things to be growing in one's stomach and bowels. How do you account for them? Surely, God did not intend that such things as these should grow inside of a person."

My reply was, how do you feel, and how are you effected at the time of discharging such formations or substance? "I have pains in my stomach and bowels, giddiness and swimming in my head, and when I am having an action from my bowels, I suffer great pain, as if in labor. I am weak and languid, and feel as if I were no account."

At this point I am stumped, not having read from any author or met with such a case in my practice heretofore. While treating for ascarides, I was hopeful of destroying their reproduction; but now that they are superseded by a spontaneous growth of vegetable roots in the alimentary track, I am puzzled in my pathology and the required therapeutical treatment in this case. However, my last prescription is as follows: Comp. Ext. Colocynth., Turkey Rhœi., Castile Soap, aa, grs. xxx. M. Pills xxx. Two every morning before breakfast.

Under this treatment, to-day, January 12, 1874, I found my patient's health improving. She is in better spirits, dizziness of the brain greatly diminished, good appetite and digestion, and the *roots, which she continued to pass, lessened in quantity* and in *point of development;* pains in her stomach and bowels, so much complained of, diminished in severity.

Dr. Gaillard, without saying more now by mail, I send to you

some of the *ascarides*, also the *roots*, for examination and commentation. Think you will find them to be interesting pathological specimens, and a new phenomena to the Profession.

NOTE.—Will examine and report.—ED.

ECLECTIC DEPARTMENT.

"Carpere et colligere."

ART. I.—CLINICAL LECTURE ON THE MEDICAL TREATMENT OF GRAVEL AND CALCULI. By JAMES TYSON, M. D., Clinical Lecturer on Microscopy, Urinary Chemistry, and Renal Diseases in the University of Pennsylvania.

In a previous lecture I asked your attention to the formation of urinary calculi, and the method for determining their composition; means so simple and easy of application that they should be familiar to every practitioner. To-day we will discuss the treatment of the condition incident to their presence and the tendency to their formation. None of you who have witnessed a case of nephritic colic need be impressed with the importance of being able to relieve the painful symptoms of this condition, or, still better, if possible, to prevent their occurrence.

The treatment naturally resolves itself into the *preventive*, the *solvent* and that required during a *paroxysm* of nephritic colic. A hasty conclusion would seem to require that the latter two should be identical; but, when we come to consider the efficiency of the solvent treatment, we will soon discover that it is far too slow in its action to be relied upon when pain so severe as that caused by impaction of a stone is to be relieved.

I. Suppose, then, you are called upon to treat a patient in the agonies of nephritic colic, so called. Under these circumstances a small stone is supposed to have left the pelvis of the kidney and to be working its way through the long but narrow ureter, whose diameter is not greater than that of an ordinary

knitting-needle, if as great. The evidence of such an attack is discovered in a degree of pain which is seldom surpassed in severity, and which, starting in the lumbar region, extends thence along the line of the corresponding ureter and groin to the testicle, which is often retracted. It is scarcely possible to mistake the import of such pain; and very likely the patient, from his experience in one or more previous attacks, will himself have made the diagnosis.

At this stage the composition of the stone is not of material importance. To relieve the pain is the urgent demand. Happily, means are at our disposal promptly to do this. A hypodermic injection of the one-sixth of a grain of sulphate of morphia, followed by hot poultices constantly kept up, will generally so far influence the pain as to give you at least a breathing spell in which to prepare yourselves for further action. Suppositories containing one-half grain of extract of opium or a grain of powdered opium, with one-half grain of extract of belladonna, should be ordered, with directions that one shall be introduced into the rectum every three hours. A more frequent use will scarcely be of further service, since not more than the quantity named is likely to be absorbed in this time. A hot bath may also be suggested in case relief is not obtained, and the hypodermic injection may be repeated, if necessary, at the next visit.

A specimen of urine should be obtained, if possible, before the second visit, and examined microscopically. In a certain number of cases no information whatever will be derived from it. In others, again, you will promptly detect crystals of uric acid, sometimes large enough to be seen with the naked eye, in the shape of the so-called "red-pepper" grains; in others the microscope will detect the octahedra and dumb-bells of the oxalate of lime. In the former instance you have a uric acid calculus to deal with; in the latter probably a small stone of oxalate of lime, though not necessarily, since a deposit of crystals of oxalate of lime sometimes attends uric acid concretion; but the probabilities of the oxalate composition will be greatly

increased if the crystals, whether octahedra or dumb-bells, tend to aggregate themselves, thus forming *microscopic calculi*. Whenever this has been the case, and I have subsequently obtained the stone for analysis, I have invariably found it to be composed of oxalate of lime. Phosphatic calculi are rarely the occasion of nephritic colic, since they are never found as primary stones in the kidney, nor indeed in the bladder; but are subsequently added to previous nuclei of whatever composition, in consequence of an alkaline reäction induced either in the whole mass of the urine or that immediately around the calculus, as the result of which the triple phosphates and the phosphate of lime are deposited in consecutive layers.

Should such examination of the urine lead to a conclusion that the offending stone is uric acid, large doses of citrate of potash may be administered in connection with the anodyne treatment, partly in application of the principle to be presently explained in connection with the solvent treatment, and partly with the hope that by flushing the kidney with water the concretion may be pushed onward towards the bladder. If the calculus be oxalate of lime, such treatment can only be justified by the latter motive, since to hope for its solution is futile.

Should the patient become nauseated in the course of the above treatment, you may assure him that such a result is really desirable, since the increased pain is often due to a spasm of the muscular coat of the ureter, as the result of which the stone is more closely grasped, while the condition of relaxation due to the nausea may aid in interrupting the spasm, and thus relieve the pain.

Supposing the attack terminated, the stone has either reached the bladder, or, having established a temporary tolerance in some part of the ureter, remains quiescent for a time. In the former case it will probably be passed by the urethra, and, for the discovery of it, careful examination should be made; while in the latter it will inevitably excite another attack at some period more or less near.

II. It is with a view to dislodging such, as well as aiding in

the escape of other stones which may be resting in the pelvis of the kidney, that the *solvent* treatment is used. By means of carefully conducted experiments by Dr. Roberts, of Manchester, England, author of the very useful practical book on "Urinary and Renal Diseases," we have arrived at quite accurate knowledge of our powers in this direction.

In the first place, however, let us recall the composition of renal calculi. For practical purposes it may be stated that three-fifths of all stones in the bladder have been found to be composed of uric acid or its compounds, two-fifths of phosphatic combinations, and three or four per cent. of oxalate of lime. But I have already said that phosphatic stones of small size rarely, if ever, exist in the pelvis of the kidney. It is only when calculi have reached considerable size, so that by partial occlusion of the ureter the urine has become backed toward the kidney, and in consequence of its accumulation has acquired, through decomposition, a change in its reäction, that the phosphatic laminæ are deposited, and at this stage curative medical treatment is totally out of the question. Indeed, it has been proven that the nuclei of almost all calculi which have commenced their formation in the pelvis of the kidney are composed of uric acid or oxalate of lime; and in a large number of calculi composed of uric acid there is found to be an oxalate of lime nucleus.

The solvent treatment, therefore, resolves itself into attempts to dissolve calculi of oxalate of lime or uric acid and its compounds. The general method of Dr. Roberts was to allow alkaline solutions to flow over stones soluble in alkalies—that is, uric acid, urates, and cystine (a very rare concretion)—at a rate similating that at which urine is supposed to trickle down from the kidney through the ureter; while acid solutions were caused to flow over those found soluble in acids, *i. e.*, oxalates and phosphates. The result of these observations proved that it is not impossible to produce some effect upon uric acid; that all attempts to dissolve oxalate of lime or mulberry calculus are futile; and that, although phosphatic concretions are suscepti-

ble to the action of acid solutions, the practical impossibility of producing through the system a sufficient degree of acidity of urine restricts the application of the principle to injecting the bladder with such solutions, with a view to acting upon phosphatic stones in that situation.

From this we learn that there is only reasonable possibility of acting upon uric acid and cystine with a view to diminishing their size by solution. The experiments of Dr. Roberts have also informed us what alkaline salts are most useful for this purpose. In the first place, he has shown that the potash salts are more efficient than the soda salts; and secondly, that of these the carbonates are the most active. But it is well known that the citrates, acetates, and tartrates become converted into carbonates by the time they reach the kidney, or at least are eliminated as such; and in these we have preparations very much more agreeable, as well as more soluble and better borne by the stomach, than the carbonates themselves. They become, therefore, the most suitable remedies to administer; and perhaps the citrate is to be preferred—especially if no purgative action be required; but the acetate may be interchangeably used. Of these salts of the vegetable acids forty to fifty grains may be given every three hours, freely diluted, say in three to four ounces of water, with lemon or other vegetable syrup added, if desired, to flavor; about six drachms of the salt should be taken by an adult in twenty-four hours. Of course liquor potassæ and the bicarbonate of potash come under the same category; so also the lithia salts; but there is considerable difference of opinion as to the efficiency of the latter, some vaunting them very highly, while others declare them inactive on account of their sparing solubility, and I have not had sufficient experience with them to be justified in giving an opinion.

Some interesting facts, with which you should be familiar, were developed by Dr. Roberts as to the strength of the solvent solutions employed, since upon them is based the appropriate dose of the remedies. Thus, it was found that a strength of

less than forty to sixty grains of the bicarbonate to the imperial pint were very much more feeble, while, on the other hand, solutions containing more than sixty grains to the pint exhibited also a diminution in solvent powder, which was finally arrested by the formation of a white crust of alkaline *bi-urate* on the surface of the calculus. With a solution of eighty grains to the pint this bi-urate crust was loose and easily detached, like a layer of whitewash; but with a solution of one hundred and twenty grains to the pint it was tenaciously adherent, and very little dissolution took place with carbonate of potash, and none at all with carbonate of soda. With solutions of one hundred and sixty and two hundred and forty grains to the pint, there was no loss of weight with potash or soda; the fragments of stone became invested with a thin, tough coating of bi-urate, resembling white paint, which put a stop to all solvent action.* The quantities of the vegetable salts above mentioned, and in the manner described, have been found by Dr. Roberts to produce the degree of alkalescence required; and he found further that when urine alkalized by the internal administration of these salts was passed over the surface of uric acid calculi at blood heat, the calculi underwent solution at the *mean rate of twelve and a half grains in twenty-four hours.* Such an exhibit at least merits a trial, and, as far as my experience goes, the trial has been justified by the results.

The treatment should be kept up for a considerable length of time, but should be discontinued when an ammoniacal state of the urine is developed, since under this condition solution ceases, while on the other hand a deposition of mixed phosphates (triple phosphate of ammonia and magnesia and amorphous phosphate of lime) takes place on the surface of the calculus, and it of course becomes larger. The simple presence of amorphous phosphates, however, which are often observed, particularly after a meal, need be no contra-indication, since they do not interfere with solution and are not disposed to concre-

* Robert's Urinary and Renal Diseases, p. 240, first American Edition. Philadelphia, 1866.

tion. It is the ammoniacal state which is to be avoided. An interruption of the treatment should be enjoined at such times until the urine again becomes acid.

Such is the solvent treatment of uric acid gravel; and, if it be clearly borne in mind what alone is claimed for it, a power of partial solution or diminution in size and small calculi, so that they may more readily pass through channels ordinarily much too contracted for them, and not the destruction of large stones already in the bladder, there need be no disappointment in its results. A stone in the bladder of considerable size should be turned over to the surgeon, who, with his knife or lithotrite, will make quick work of it.

You may, perhaps, wonder why I have said nothing about Vichy or other alkaline waters, which have not only had so much reputation in dissolving uric acid stone, but have also been used with such reckless indiscrimination in all calculous disease, without regard to composition or indication. I have purposely made them secondary, because I believe them to be very much less efficient than the alkaline citrates and acetates of potash, while they are more expensive and difficult of access. And in this I am only following the precept of one whose great experience in these maladies entitles him beyond all others to our respect—Sir Henry Thompson, who twenty years ago declared the "citrates and carbonates of potash are more potent and certain than Vichy water," and who says, so recently as 1873, "I have never at any time prescribed Vichy water for any urinary affection,* on the ground of its inferiority to the potash solutions." I think the citrate may be fairly said to be the salt which of all others offers the best chance of success; and this by common consent of all who have examined the subject." Compared with such authority as this, confirmed by the carefully conducted experiments of Dr. Roberts, my own testimony to the same end is of little value, except it adds one more to the list of those "who have examined the subject." I might

* The Preventive Treatment of Calculous Disease, p. 58, Lindsay & Blakiston, Philadelphia, 1873.

say of the Vichy water that the alkali which it contains is the carbonate of soda, and not of potash, and of the former salt there are forty-seven grains to the English pint.

III. But if much may be expected from the solvent treatment of gravel, more may be expected from the *preventive* plan. Here also, for the reasons already stated, it becomes practically the preventive treatment of *uric* acid concretion and its congeners. And although it is the case that oxalate of lime calculi are quite insoluble in the solutions efficient in dissolving uric acid, and indeed in the system in any solutions, it happens that the circumstances attending their production are almost identical with those attending the formation of uric acid, and that the preventive treatment of the latter becomes therefore the preventive treatment of oxalate of lime.

What, then, are the indications for the use of this treatment, by which we hope to prevent the formation of stone in the urinary passages? It is well known that urates, uric acid, and oxalate of lime crystals are occasionally found in the urine of individuals who are perfectly healthy. And you will many times be called upon to dispel the illusion based upon the appearance of "sediment" in the urine of a patient who is rendered unnecessarily wretched by that fact, and who is really in perfect health.

These deposits are apt to appear in urine, sometimes in considerable quantity, not only after an attack of indigestion, but also from defective assimilation even without symptoms of indigestion, and by whatever cause induced, whether from gross disregard of the proprieties of eating, or the use of a single glass of wine to which one has not been accustomed. And oxalate of lime crystals are almost always found in the urine after a meal of vegetables containing oxalic acid, as of sorrel, tomatoes, or rhubarb. I have often told you that when I wish to obtain examples of the octahedra of oxalate of lime, for examination with the microscope, I always secure a good crop in my own urine by eating a full meal of the rhubarb or pie-plant, if it be in season; in a few hours after which, my urine is loaded

with beautiful crystals of large size. I also know a medical gentleman who is unable to eat tomatoes, because of the crystals of oxalate of lime which appear in his urine and give him pain in their descent to the bladder.

How, then, are you to determine the presence of the so-called "uric acid diathesis?" In the first place, by the persistence of the deposit, which is usually pinkish in hue, or gives to the urine a cloudy appearance which is dissipated by heat. And here I must again caution you against a deposit which always takes place when urine is cooled much below the temperature of the blood. The urates in health are usually present in the urine in such quantity that they are dissolved at the temperature of the body—that of the urine when it is passed—or even at a temperature somewhat lower. In cold weather, therefore, when the urine becomes cooled much below that point, a deposit inevitably takes place, which is usually found made up of the amorphous mixed urates of potash, soda, lime, and magnesia, and is physiological.

If, however, having observed the precautions suggested by the above facts, the deposit persists day after day, and you find upon inquiry, as you will very likely to, that the patient's father or grandfather had attacks of "gravel" (for the affection is very constantly hereditary), you may conclude that you have a case of uric acid gravel. Or if the patient or his ancestors have had gout, you may be equally confident; because this is also well determined, that uric acid gravel and gout are identical in their causation. For, in addition to the fact that the gouty deposits in the joints are made up of mixed urates generally crystallized in acidular form, we have numerous cases in which an attack of gout alternates with one of uric acid, or one member of a family has gout and another uric acid gravel. Indeed, gouty patients almost always have deposits of urates and uric acid in their urine. Finally, I need only allude to the inference you may draw if the patient has already suffered an attack of nephritic colic.

Supposing the presence of such a condition determined, how

will you manage it in order to prevent the final great evils, renal calculi or stone in the bladder? Here, as elsewhere, the foundation of a correct treatment must be a knowledge of its pathology. And what is the pathology of uric acid, and I may say also of oxalate of lime deposits? With one universal accord the persistent presence of these deposits in the urine is admitted to be indicative of deficient assimilation. From some cause or other, food which should be worked up into completely soluble substances stops short at principles which are most insoluble, and which, therefore, are deposited, in the crystalline shape alluded to, in the tubules of the kidney and pelvis of the organ, where they act as foreign bodies, causing irritation and pain, and in their aggregation form the calculi, the transit of which to the kidney causes so much suffering. Attending this condition is often found a so-called torpor of the liver and bowels—that is, a condition which, whatever its true nature, is attended with deficient excretion into the alimentary canal.

Under these circumstances the kidney is already overworked in its attempt to remove from the blood these insoluble substances, and the indication is to relieve it by throwing the work, or part of it, on some other organ. It is not sufficient to administer Vichy water or other alkaline substances, which by dissolving the uric acid and urates simply hide the enemy without preventing its presence. Such a course is aptly compared by Sir Henry Thompson to that of the fabled ostrich which is said to bury its head in the sand when pursued, and believes itself secure because it no longer sees its enemy. There may be, it is true, palliation of symptoms by such treatment, and the patient may be for the time relieved as well as comforted by the fact that he no longer *sees* the deposits, but they will often return when the remedies are discontinued.

This is, of course, admitting a purely *chemical* action of alkalies in promoting the solution of uric acid; but it is too sweeping an assertion with regard to the valuable citrates, tartrates, and acetates previously alluded to, which have been shown by Drs. D. Campbell Black, Basham, and Geo. Harley to have

something more than an action of this kind, and to possess also, when administered, an important *physiological* action through which the oxidation processes of the economy are much increased, so as to transform the slightly soluble uric acid into the highly soluble urea—apparently through an increased activity of all the digestive functions. Nor is this effect overlooked by Thompson, who alludes to it in claiming the superior efficiency of the citrates and tartrates over Vichy and similar carbonated waters.

If, however, it is possible to divert some of the work of the kidney to another channel, and thus relieve an organ already overworked, it is much better at least to superadd and sometimes, perhaps, to substitute such treatment. This may be accomplished by acting upon the liver and bowels—organs which in their combined action are quite as important excretors as the kidney. Few who have had experience in these cases have not seen the advantage of a mercurial purge at night, followed by a saline the following morning. The constant use of these means, however, would be imposible, for evident reasons, and others must be sought, in application of the same principle of complemental elimination. Such means are afforded in the natural *saline* purgative waters, for the general introduction of which we are also largely indebted to Sir Henry Thompson. These have for their chief ingredienss sulphate of soda and sulphate of magnesia, and are represented by the Püllna, Friedrichshalle, Marienbad, Carlsbad, and Franzenbad Springs in Germany. The Püllna waters contain about one hundred and fifty-four grains of sulphate of soda and one hundred and sixteen grains of sulphate of magnesia to the English pint; those of Friedrichshalle, fifty-eight grains and forty-nine grains, respectively; those of Marienbad, forty-eight grains of sulphate of soda, none of magnesia, nine of *carbonate* of soda, and a little iron. The Carlsbad contain twenty-five grains of sulphate of soda, no magnesia, and thirteen grains of carbonate of soda: the Franzenbad, thirty grains of sulphate of soda, no magnesia, six grains of carbonate of soda, and a little iron. In contrast

with these, Vichy contains but three grains of sulphate of soda, no magnesia, forty-seven grains of carbonate of soda, and a little iron, to the pint; and Vals, none of the former two, but sixty-five grains of carbonate of soda, with a little iron. The latter are, therefore, as already stated, simply strong solutions of carbonate of soda.

Of these waters, that to which Sir Henry Thompson gives the preference, and that upon which my own experience has been based, is the Friedrichshalle, the Püllna having been found to purge too freely and to produce griping. Of the Friedrichshalle, about eight ounces or an ordinary tumblerful may be given every morning about an hour before breakfast. This is usually followed after breakfast by one or two full copious stools, produced by about twenty-five grains of sulphate of soda and twenty of sulphate of magnesia—quantities which, if dispensed from the shops or even by evaporating the proper amount of the natural water, would probably have no effect whatever, though the latter would still be more efficient than the salts as ordinarily obtained. Thus there will be seen to be some peculiar efficacy in the natural waters, the cause of which is not precisely known. This treatment should be kept up for three weeks to a month, and after a short intermission be returned to. In continuing the treatment, there will be found this important advantage, that, instead of having to increase the quantity each day, it may be diminished, while the effect will still continue, so that by a gradual reduction, at the end of three weeks, four ounces will have as much effect as eight at the outset. It is occasionally of advantage to precede the treatment by a small dose of blue pill—three to four grains; this, if digestion be deranged, the appetite bad, and the tongue foul. Sir Henry Thompson also reommends the use of five ounces of hot water in connection with the eight or reduced amount of the Friedrichshalle; but I have found patients complain of discomfort evidently due to a distention of the stomach when this dose is administered. When it can be borne, additional effect may reasonably be expected from the dilution as well as the increased

temperature, since in both these respects it is made to approach the character of the water at the spring, which is hot and less concentrated than that which is exported. The increase in temperature may also be obtained by placing the glass of water in a second vessel containing hot water.

You may wish to know precisely the plan of the eminent English surgeon. It is to administer the Friedrichshalle as above directed for one, two, or three weeks, according to the nature of the case and results, and then to combine with three or four ounces of it in five or six of the Carlsbad, which you recollect contains twenty-five grains of the sulphate of soda and thirteen of carbonate to the pint; it is therefore more alkaline. To this combination he adds three or four ounces of hot water. After giving this for three or four weeks, six, seven, or eight ounces of hot Carlsbad are given alone for another fortnight. This course may be repeated once in three or four months, if necessary, while in the meantime, as an occasional aperient and corrector of digestion, he knows nothing at all equal to Friedrichshalle, leaving the patient, as a rule, less constipated than he was before. With a very much less experience, of course, but having examined the subject with considerable care, and having lost no opportunity of testing the plan, it has seemed to me we can do much more for these cases than formerly.

Should the Friedrichshalle prove inefficient in some cases, the Püllna may be substituted as a more powerful water, containing, as it does, nearly two and one-half drachms of sulphate of soda and nearly two drachms of sulphate of magnesia to the pint.

These waters, including Püllna, Friedrichshalle, and Carlsbad, are now easily obtained in this country, being largely imported by a Philadelphia firm. I must say, however, that the various salts of these waters advertised for sale as the "Carlsbad salt," "Püllna salt," etc., are no substitute for the natural waters, having very little more virtue than the same quantity of salts obtained from other sources.

The expense of obtaining these waters in this country will

doubtless be an obstacle to your ordering them for some patients. I have therefore taken some trouble to find out which of the numerous American spring waters correspond or approach them in composition. Most prominent among these I find the waters of Crab Orchard, Lincoln county, Ky. These waters contain 7 grains of sulphate of soda, and 25.6 grains of sulphate of magnesia, to the pint. From these are derived by evaporation the celebrated Crab Orchard salts, whose superiority over the ordinary Epsom salts is well known. These contain 63.19 parts of sulphate of magnesia, 4.20 parts of sulphate of soda, with smaller quantities of sulphate of potash and lime, in 100. Besides being less irritating than Epsom salts, they possess the advantage claimed for Friedrichshalle of not requiring the daily quantity necessary for an effect (at first a drachm freely diluted) to be increased. The Estill Springs, located in Estill county, Kentucky, furnish 33 grains of sulphate of magnesia to the pint; but no sulphate of soda is named in the analysis of Dr. Robert Peter, which I find in Walton's Treatise on Mineral Springs of the United States and Canada.

The well-known Bedford Springs water at Bedford, Pennsylvania, also belong to this class, though containing but ten grains of sulphate of magnesia to the pint. They are also chalybeate, and are said to resemble the Franzenbad waters of Bohemia, to which we have referred; but the latter contain thirty grains of sulphate of *soda* to the pint, while the Bedford contain but ten grains of sulphate of *magnesia*. The beautiful location of Bedford, in connection with the undoubted medicinal value of its waters, renders it a very popular summer resort. I may add that "gravel" and "calculus" are among the ills for which Bedford water has long claimed efficiency. The numerous Saratoga Springs contain almost none of these valuable ingredients, but preëminently chlorides and carbonates. Thus much of information, and something more, you should have of American spring waters, in order that you may intelligently advise those who consult you with regard to them. It

is not unlikely that the skepticism with which American physicians have hitherto regarded the medicinal effects of spring waters has been, in part at least, due to our ignorance of their actual qualities, and that we are, therefore, in a measure responsible for their having largely fallen into the hands of empirics. Much valuable information may be found in the volume above alluded to, and one or two others recently issued from the American press.

There is one more point in connection with the preventive treatment of calculus diseases to which I must call your attention, and that is diet. I have already alluded to the effect of certain vegetables, as the rhubarb or pie-plant, tomato, and sorrel, in promptly producing crystalline deposits of oxalate of lime. By persons, therefore, inclined to oxalate of lime concretions, these should be avoided. There is also reason to believe that potable waters charged with the salts of lime increase the tendency to the formation of oxalate of lime calculi. To the same end, fatty matters, saccharine substances, and those containing sugar or readily converted into it, as sweet fruits, together with alcoholic drinks, should be omitted by those subject to uric acid deposits; the use of these matters increasing the work of the liver, and, with it, the vicarious action of the kidneys. While the use of a purely nitrogenous diet is, for the same reason, to be avoided, and the free use of vegetables, regarding the exceptions named, to be recommended, total abstinence from animal food is not necessary or desirable. Nor need tea and coffee be interdicted, these substances having been shown to diminish the formation of uric acid and increase that of urea, acting, therefore, like the citrates, acetates, and tartrates. Quinine, digitalis, atropine, and cod-liver oil are placed in the same category—diminishing the formation of uric acid and urea as well—and may be used in connection with the previous treatment as the patients' condition or special circumstances may require.—*Medical Times.*

ART. II.—TREATMENT OF DISEASE IN CHILDREN. By EUSTACE SMITH, M. D., London, Physician to His Majesty the King of the Belgians.

There is one class of remedies which is of singular value in the treatment of the diseases of young children—viz., the alkalies. In all children (infants especially) there is constant tendency to an acid fermentation of their food. This arises partly from the nature of their diet, into which milk and farinaceous matters enter so largely; partly from the peculiar activity of their mucuous glands, which pour out an alkaline secretion in such large quantities. An excess of farinaceous food, therefore, soon begins to ferment, and an acid is generated, which stimulates the mucous membrane to further secretion. In all chronic diseases, and in many of the acute disorders, this sour condition of the stomach and bowels is present. Alkalies are therefore useful: Firstly in neutralizing the acid products of this fermentation; and secondly, in checking the too abundant secretion from the mucous glands. A few grains of soda or potash, given an hour or two after taking food, will quickly remedy this derangement and remove the distressing symptoms which arise from it. In the chronic diseases, indeed, attention to this point is of especial importance; for by placing the stomach and bowels in a healthy state, and insuring a proper digestion of food, we put the child in a fair way of recovery, and prepare the way for the administration of tonic and strengthening medicines, by which his restoration to health is to be brought about.

In prescribing for infants, an aromatic should always be included in the mixture. The aromatics are useful, not only for their flavoring properties, but also for their value in all those cases of abdominal derangement where flatulence, pain and spasm, resulting from vitiated secretions and undigested food, are present to increase the discomfort of the patient. Such dyspeptic phenomena are usually relieved rapidly by the use of these agents; and aniseed, cinnamon, caraway seed, or even tincture of capsicum in minute doses, will be found important

additions to the prescription in all cases where alkalies are required.

In prescribing for children, the proper dose of medicine can not always be calculated according to the age of the child, and does not in all cases bear the same proportion to the quantity suitable for an adult. For certain drugs children show a remarkable tolerance, while to the action of others they show as remarkable a susceptibility. Thus, opium, it is well known, acts upon a child more powerfully than would be expected, judging from the mere difference of age. It should, therefore, be given to infants with a certain caution, especially if the child be enfeebled by disease. It is, however, a medicine which is of especial value in the treatment of the diseases of infancy, and may be given without fear if care be taken not to repeat the dose too frequently. Belladonna, on the contrary, can be taken by children in large quantities. A child of two or three years old will bear without inconvenience a dose which in an adult might produce very uncomfortable symptoms. Lobelia, again, is a remedy which is very well borne by children. Dr. Ringer has given it to "very young children" in doses of five minims every hour, and in no case has he noticed any ill effects follow its administration. Arsenic should be given to children over five years in the same dose as that used to adults, and infants of a month or two old will take one drop of Fowler's Solution three times a day with great benefit in cases of gastric catarrh. The influence of mercury upon young children deserves remark. It seldom in them produces stomatitis or salivation; but an excess of the drug is not therefore harmless; its influence is seen in the irritation of the alimentary canal which it so often excites, and in the profound anæmia which it induces. The anæmia which is so common a sequence of constitutional syphilis in infants is no doubt often a result of too long-continued mercurial treatment.—*Med. Times and Gazette.*

ART. III.—SKIN-GRAFTING. By E. LEROY WEMPLE, M. D.

When M. Reverdin, of Paris, October 16, 1869, first transplanted skin from one portion of the body to another, he opened a new field to the Profession for the treatment of burns and indolent ulcers, which has many advantages over the old method.

Encouraged by M. Reverdin's success, Mr. G. D. Pollock, of St. George's Hospital, was the next to derive good results from the operations; since that time skin-grafting has been practiced in Europe and in the United States with like success.

Epidermic grafting, or the practice of applying the products obtained by scraping the skin, has been recently recommended as a substitute for skin-grafting, but it seems quite improbable that such a method of treatment will ever meet with any success.

The chief advantages of transplantation are to accelerate the healing process and to obtain a more pliable cicatrix, which is more skin-like than the ordinary cicatricial tissue, and hence lessens deformity, and is less liable to reülcerate.

An indolent ulcer of long standing may be made to assume an entirely new character in a few days, by placing upon its surface several cutifying centres; this is done by taking small pieces of skin from different parts of the body and placing them on the granulations, confining them there until they shall have taken root as it were, when numerous stellate prolongations begin to appear from their circumference, and by rapidly extending, they soon cover a surface many times the size of the original grafts. The edges of the ulcer are stimulated, and in a short time connecting links of new skin rapidly form, which by meeting the prolongations from the grafts divide the sore into sections; by repeating the operation, the ulcer is completely covered with a comparatively soft cicatrix. Frequently the grafts live but do not seem to grow, yet they visibly stimulate the edges; in fact, this seems to be the rule in syphilitic ulcers, or any ulcer of feeble vitality. The sore should be secreting laudable pus, its granulations should be healthy, vigorous, and even with the surface, to insure the life of the graft.

Bryant, an eminent English surgeon, employs for the removal of the sound skin, an instrument consisting of a pair of scissors and forceps combined, for which he claims great advantages; but all that is necessary is a pair of curved scissors and a forceps.

Supposing we have an ulcer in the condition already described; we select that part of the body where the skin is most attenuated, as the fore part of the arm, inside of the thorax, or inside of the thigh, then grasp a small portion of the skin with the forceps, and with the scissors cut it off.

How much skin should be taken? This question is in dispute. I have experimented with sections from one to six lines in diameter, and find that the chance of life is greater when they are from one to three lines in diameter. The sections should include the upper layer of the true skin, with the rete mucosum. Large sections may be taken, and cut into as many pieces as desired with the scissors, or laid on the thumb-nail and cut with a knife, care always being taken not to contuse the sections with dull instruments. When the graft is large it takes longer for the circulation to be established, hence it is more liable to die.

Granting that the sections of skin have been properly taken, they should be accurately applied to the granulating surface; the ingrafted centres having a stronger influence in exciting healing action in the edges of the ulcer when placed near them, than when isolated in the centre of a granulating surface, they should be placed about one-half of an inch from the margin and three-fourths of an inch from each other, and secured with strips of common adhesive plaster just wide enough to cover them, which should be so applied as to keep the grafts constantly in one position; now it should be dressed with some disinfecting lotion.

At least seventy-two hours should elapse before the grafts are examined. Their appearance on the removal of the first dressing varies considerably; at times they will seem to have taken root and be alive, at others, to have disappeared alto-

gether, while in a third class the surface of the cuticle will be seen floating as a thin film upon the secretion of the sore, the basement membrane of the cuticle—the essential part—being left; in the latter case the graft and granulations are so much alike in appearance that it often becomes difficult to distinguish between them; but knowing where the graft was placed, its smooth surface and deep red color make it readily distinguishable.

The sore should now be washed with tepid water as it is forced from a sponge, the latter never touching the grafts, as they might be uprooted.

It is not necessary to renew the strips in the second dressing; apply the lotion on a piece of lint cut the size of the sore, and covered with oiled silk, if the secretions are scanty, to maintain a proper degree of moisture; but if the secretions be copious, their retention will endanger the life of the graft by decomposing; hence it should never be used in a sore that is actively secreting pus. The dressing should be renewed twice during the day, care being taken to moisten the former dressing before its removal.

Choice of Dressings.—I have experimented with cerates, lotions, and medicated ointments, and I find that the following lotion is superior to anything I have used:

℞.—Acidi Carbolici, grs. iii.;
Aquæ Puræ, ℥i.;
M. Ft. Lotio.

Are the grafts alive? We have already alluded to their appearance on the removal of the first dressing, but at this time it is often impossible to say whether they will live or die. A favorable prognosis may always be given if the grafts retain their original appearance; but it is only when the stellate prolongations are visible that we can speak with certainty, and their time of appearance varies from three to seven days, depending upon the condition of the ulcer. One-third or one-half of the ulcer is all that should be covered by the first ope-

ration. If a larger surface be grafted, the secretion of pus will become so copious as to cause the disintegration of the grafts.

The question now arises, how many times is it necessary to repeat the operation? This depends upon the size and character of the ulcer, whether traumatic or syphilitic, whether vigorous or indolent; if it is traumatic or vigorous, two operations will generally be sufficient, but if syphilitic or indolent, it may require five or six.

I have met two cases of ulcer, both occurring in patients affected with constitutional syphilis, upon which grafts would not live.

When the proliferation of the engrafted elements, and the marginal cicatrization have closed the ulcer, a scaly exfoliation of the new epidermis usually takes place, which continues for a few days, when the skin assumes its natural sensitiveness and permanent form.

Having been connected with the U. S. Marine Hospital during the last eighteen months, I have had ample facilities for experimenting.

Fifty cases of ulcer have been treated during this time, out of which about twenty have been grafted; the first cases were not reported, as my experience in grafting was not sufficient to enable me to perform the operation properly, or make correct observations.

The following reports are a general average of the results obtained by this method of treatment:

I. W. A. Lambert, aged fifty-four, married, native of England, entered the U. S. Marine Hospital December 4, 1872, with an indolent ulcer on the outside of the left leg, extending from the ankle to the upper third, and about four inches in its transverse diameter.

This extensive surface was the reülceration of an old cicatrix and involved the deeper structures; the ulceration, which had been going on for four months, was induced by dissipation and exposure to wet and cold.

The patient being very anæmic, was placed upon a mixture of cod-liver oil, phosphate of iron, and compound tincture of columbo; absolute rest was required, and oakum saturated with carbolic acid lotion was kept applied to the ulcer.

The condition of the patient improved rapidly, and in about thirty days the granulations had reached the surface of the skin.

January 5th, 1873.—Five grafts were made; three days later, when the dressing was removed, they were found adherent, and the margin greatly stimulated; patent lint was now substituted, as oakum seems to kill the grafts. The granulations were red and secreting good healthy pus; the grafts grew rapidly, and January 20th they were the size of a twenty-five cent piece.

January 27th.—Seven new grafts were placed upon the most vigorous portions of the granulations, where they became adherent and grew, soon meeting the extending lines from the margin and those from the other grafts, covering one-third of the ulcer.

February 9th.—Nine grafts were made upon the most inactive granulations; seven of them became adherent and grew, but slowly, yet they stimulated the margin, which overtook and closed them in.

March 1st.—Seven new grafts were made on the lower portion of the ulcer; they soon met the marginal growth, and in twenty days they closed the lower half of the sore; this left a granulating surface of about three square inches on the middle of the outside of the leg.

March 31st.—Seven grafts were placed on the unhealed granulations; three days later, when they were examined, only two were found adherent; these remained as islets, growing very slowly and feebly stimulating the margin.

The ulcer assumed such a sluggish character that it was deemed advisable to make stimulating applications of oakum, iodine ointment, etc., till the granulations should be in a condition to support the life of the grafts.

The patient, being very anxious to go to work, left the hospital May 2d, with an ulcer of about two square inches. Thus an indolent ulcer of about four month's standing, and occupying a space of about forty-eight square inches, was nearly healed in five months.

SUMMARY.

Jan. 5th, 5 grafts made, all grew.	March 1st, 7 grafts made, all grew.
" 27th, 7 " " " "	" 31st, 7 " " 2 "
Feb. 9th, 9 " " 7 "	

II. Peter Evans, age twenty-seven, single, native of Russian America, entered the U. S. Marine Hospital January 4, 1873, with a gangrenous ulcer on the lower third of the anterior portion of the left tibia, two inches long and one inch wide; the skin was first wounded by a fall about sixty days before his admission to the hospital, and being long exposed to cold and wet, it sloughed extensively.

Treatment.—Absolute rest, a liberal diet, and two-grain-doses of citrate of iron and quinia for his anæmic condition.

Bromine was applied to the slough with a glass brush, it was then covered with cerated lint and oiled silk secured by a roller; this dressing was removed once daily till granulations made their appearance, when iodine ointment was substituted.

Three months after his admission the granulations had reached the surface and assumed a healthy form.

Nine grafts were now made, one about two lines in diameter. April 23d, or three days after the grafting, the dressing was removed, the large section coming away with the straps, the others firmly adherent and growing. Carbolic acid lotion and oiled silk were used as a dressing.

April 27th—The prolongations from the grafts had united with the skin at two points which divided the ulcer into two portions; four grafts were now taken from a comrade, two being confined on each portion; three days later, the grafts were examined, and found apparently dead yet adherent; the straps were renewed and another examination was made the second day, when two had disappeared altogether, while the remaining

two were growing rapidly. The skin around the ulcer was very transparent.

May 7th.—The patient left his bed and played several games of croquet, which produced an abrasion of the skin, and a new ulcer was formed.

May 11th.—The original ulcer was healed—twenty days after the first grafting.

May 30th.—Three grafts were made on the newly ulcerated surface, and three days later the dressing was removed, when one graft was found dead, and the others feebly adherent; on the 26th these two had disappeared. The granulations were very feeble, yet eight new grafts were made, which, when the dressing was removed, three days after, were all dead but two.

June 10th.—The ulcer was nearly covered with new skin, and on the 14th, or eighteen days after the last grafting, it was entirely healed, and the cicatrix exfoliating.

June 27th.—He was discharged cured.

SUMMARY.

April 20th, 9 grafts made, 8 grew.	May 20th, 3 grafts made, none grew.
" 27th, 4 " " 2 "	" 26th, 8 " " 2 "

III. Herman Fisher, age thirty-eight, single, native of Germany, entered the United States Marine Hospital March 8, 1873, with an indolent ulcer on the lower portion of the calf of the right leg, about one inch and a half in diameter, and three months' standing; it was probably specific, as the patient stated that he had been affected with constitutional syphilis about a year previously.

Iodide of potassium was given, and applications of carbolic acid lotion alternated with iodine ointment, were made to the ulcer.

March 31st.—The granulations having reached the surface of the skin, and assumed a healthy character, one graft about two lines in diameter was secured upon its centre by an adhesive strap; four days later, when the dressing was removed, the graft appeared as natural skin, firmly adherent, and the pro-

longations from its edges were just visible. It grew rapidly and stimulated the margin of the ulcer to action, which soon met the graft on one side.

April 19th.—Two grafts were made upon the unhealed surface; four days later, when the dressing was removed, they were seen covered in by the rapid growth of the original graft, which had now extended over two-thirds of the ulcer.

Twenty-eight days after grafting was instituted the ulcer was closed; the cicatrix soon assumed its natural sensitiveness and vascularity.

May 17th.—The patient was discharged cured.

May 22d.—He returned to the Hospital with a reülceration of the cicatrix, caused by dissipation, and exposed to cold and wet in salt water.

He was given the same general treatment as before, with a lotion of bromide applied to the ulcer to remove the superficial slough, after which iodine ointment was used.

May 26th.—The slough being very sluggish and unhealthy, ten small grafts were made, hoping to stimulate the granulations, or change their condition; three days later, when the ulcer was examined, all the grafts were dead, but the granulations had taken on a rapid fungous growth, which was destroyed by pressure and caustics.

June 15th.—Eight grafts were made, but on the removal of the dressing none were found adherent, and they soon disappeared in the sanious discharge of the ulcer.

An iron tonic, in addition to the alterative treatment, was resorted to, with a continuation of the stimulating applications, till the 25th of June, when the patient left the hospital with the ulcer somewhat improved but no smaller.

SUMMARY.

March 31st, 1 graft made, it grew. | April 19th, 2 grafts made, 2 grew.

RE-ULCERATION.

May 26th, 10 grafts made, all died. | June 15th, 8 grafts made, all died.

IV. John Ryan, age thirty-six, single, native of Ireland, en-

tered the U. S. Marine Hospital, March 18, 1873, with a varicose ulcer on the inside of the right leg, about six inches above the ankle; it was circular, with well defined edges, two inches in diameter, and about one-half of an inch deep. The patient's health was greatly impaired by dissipation.

Treatment.—Absolute rest, a liberal diet, and tonic of tinct. chloride of iron; carbolic acid lotion was applied to the ulcer.

April 1st.—The granulations having reached the surface of the skin in several places, four grafts, each about the size of a pin's head, were made, and confined by a single adhesive strap; four days later, when the dressing was removed, three grafts were seen at minute points, differing from the granulations only in their smooth appearance and deep red color, these soon appeared as islets of skin, and in ten days after the grafting, they were about the size of a five-cent piece, reducing the sore to half its original size.

April 15th.—The surface of the ulcer having reached the level of the surrounding parts, three grafts were made, the granulations being first scarified; four days later, when the dressing was removed, two were found adherent, and a rapid formation of skin at the margin of the sore. The grafts sent out their cicatrizing prolongations, and in eight days after the last grafting only a few lines between the grafts and edges of the ulcer remained unhealed.

April 27th.—The ulcer was entirely closed, and its surface undergoing the usual scaly exfoliation.

April 30th.—The patient was discharged cured, forty-three days after his admission.

SUMMARY.

April 1st, 4 grafts made, 3 grew. | April 13th, 3 grafts made, 2 grew.

V. James Powers, age thirty, single, native of Germany, entered the U. S. Marine Hospital April 28, 1873, with a phagedenic chancre beneath the glans penis, involving the frænum; an ulcer resulted which could not be stimulated to activity, till

May 28th, when three grafts were taken from the arm, and properly secured upon the granulations.

May 31*st.*—The grafts were examined, and seen sending out numerous stellate prolongations, which rapidly closed the ulcer. The grafts assumed all the characters of mucous membrane, leaving a smooth cicatrix.

June 2*d.*—He was discharged cured, only four days after grafting was instituted.

VI. P. Freney, age thirty-eight, single, native of Ireland, entered the U. S. Marine Hospital June 7th, 1873, with a contused wound of the left hand. There was an extensive laceration of the skin on the dorsum, extending from a line parallel with the middle metacarpal bone, to one parallel with that of the thumb, and from the carpus nearly to the second joints of the first and second fingers, the integument over the metacarpo-phalangeal articulations being completely destroyed.

The wound was dressed with a lotion of carbolic acid, and the superficial slough gradually became detached.

June 17*th.*—The slough having disappeared from the fingers, three grafts were placed upon the middle, and one upon the index finger; three days later, when they were examined, none were found to be alive.

June 18*th.*—The entire slough was detached from the dorsum of the hand, and fourteen grafts were placed one-half an inch from the margin, and through the centre of the wound, three-fourths of an inch apart. Five of these lived; two on the radial border of the wound, and three in proximity to the metacarpo-phalangeal articulation. The latter group grew the more rapidly, and in ten days after the grafting, the joints were nearly covered with new skin, which assumed a cup-like appearance, the surrounding granulations bowing in to meet the extending lines of cicatrization. The growth from the margin soon overtook the former group and closed it in.

June 22*d.*—Eleven new grafts were made upon the metacarpal region, and two upon the fingers; three days later, when

the dressing was removed, the two upon the fingers and ten of the others were found to be adherent; five days after the grafting, five of the latter group were seen sending out radiating prolongations, the other five having disappeared altogether. The two that were placed upon the fingers soon covered them with new skin by meeting the marginal growth and the extending lines of cicatrization from the grafts that had covered the joints.

July 6th.—About one-half of a square inch remaining unhealed, three grafts were made, two of these being successful; in six days they had united with the growth from the edges and completely closed the injury, thirty-five days after the patient was admitted to the hospital.

In a short time the new skin had undergone a scaly exfoliation, leaving a natural sensitive surface and no deformity. The cicatrix over the joints was free from fibrous bands of ordinary cicatrization, and the varied movements of the fingers were in no way interfered with.

July 24th.—The patient was discharged cured.

SUMMARY.

June 17th, 4 grafts made, none grew.	June 22d, 13 grafts made, 8 grew.
" 18th, 14 " " 5 "	July 6th, 3 " " 2 "

VII. Wm. Collins, age twenty-seven, single, native of New York, entered the U. S. Marine Hospital July 21st, 1873, with two indolent ulcers; one on the inside of the lower third, and the other on the outside of the middle of the calf of the right leg. They were of four months' standing, circular, about two inches in diameter, and one-half of an inch deep.

The patient had suffered from constitutional syphilis, which left his system in a depraved condition; nocturnal pains were very severe.

Treatment.—Absolute rest, a liberal diet, iodide of potassium and citrate of iron and quinia. The ulcer was dressed with iodine ointment. The pains soon abated, his anæmic con-

dition was rapidly changed, and the ulcer assumed a more healthy character.

July 28th.—The ulcer on the inside of the calf being filled to the level of the skin, six grafts were placed in two rows, and each row secured by a narrow strip of adhesive plaster; three days later, when the dressing was removed, five sections were found adherent: these grew slowly and stimulated the edges of the ulcer to great activity.

August 6th.—The extending lines of cicatrization from the grafts and margin had united at many points, dividing the ulcer into several small portions; four days later these were entirely closed, and the whole cicatrix undergoing a scaly exfoliation, thirteen days after the grafting.

August 1st.—The ulcer on the outside of the calf being in a favorable condition, seven grafts were made. They were examined four days later, when six were found adherent; these grew rapidly, but their stimulating effect upon the edges of the ulcer was not very marked.

August 10th.—Fully one-half of the sore was covered by the growth of the grafts; they soon met the extending lines from the margin, and in five days the unhealed surface was about the size of a twenty-five-cent piece.

August 20th.—The ulcer was healed, and its new skin rapidly became natural and pliable.

The patient was discharged cured the 27th inst., only thirty days after his admission.

SUMMARY.

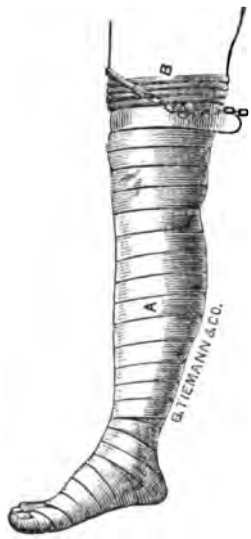
July 28th, 6 grafts made, 5 grew. | August 1st, 7 grafts made, 6 grew.

—*Pacific Med. Jour.*

ANALYTICAL DEPARTMENT.

"Qui e nuce nucleum esse vult, frangit nucem."—PLAUTUS.

A NEW TOURNIQUET. By PROF. F. ESMARCH, of Kiel.



* * * "I shall perform an operation (necrotomy, both legs) which would cause a much more profuse hæmorrhage than that of yesterday, did I not adopt a method which will enable us to completely control the bleeding.

"While the anæsthetic is being administered, we envelop the lower portion of the limb in oil silk, to prevent soiling the bandage; then we bandage the legs tightly from the toes to above the knees with this elastic rubber bandage (*A*), which, by gradual compression, forces the blood out of the vessels of the limb. Immediately above the knee, where the bandage terminates, we wind the rubber cord or tubing (*B*) four or five times around the thigh, and join the one extremity by means of the attached hook to the chain at the other end. The rubber tubing or cord compresses all the soft parts, including the arteries, in such a perfect manner that not a drop of blood can enter the bandaged portion of the limb.

"This tourniquet possesses the advantage over all others—viz., it can be adjusted to any portion of the limb, and the location of the principal arteries need not be considered.

"We now remove the elastic bandaging and the oil silk, and you will notice that both legs, below the tourniquet, present the appearance of the limbs of a corpse, the pallor of the same forming a remarkable contrast to the rosy hue of the skin above. You will also notice that we will operate exactly *as though on a cadaver.* * * *

"After the operation, the rubber cord is slowly removed, the circulation restored, and those arteries which have previously

remained unnoticed, tied. * * * The slumbering patient presents the same appearance as before the operation, his pulse is full and strong, and convalescence will no doubt follow much more rapidly and surely than if we had performed the operation in the customary manner.

The tourniquet can be used with more or less complete success in nearly all operations on the extremities. In extirpation of tumors, in the removal of scrofulous sores or caries, and resections of small bones or joints, you can proceed in the manner I have just demonstrated—viz., you need not loosen the tourniquet until the wound has been dressed."—*Sammlug Klin. Vertræge.*

Theory of Elimination Arraigned.—At the annual meeting of the British Harveian Society, Dr. C. Hanfield Jones, the President, gave an address which is published in the "Press and Circular," and from which we extract the following practical lessons:

Another source of erroneous theory, and possibly of practice, is furnished, as it appears to me, by the current theory that many diseases depend on the presence of poisons in the system, which are either bred therein, or imbibed from without. This is probably true, but the inference either tacitly drawn, or expressly made, that the main object of therapy is the elimination of the poison, seems to me very questionable. For it is certain that patients convalescent from scarlet fever and typhus do continue to give off infectious matter for many days, after they have ceased to be injuriously affected by its presence in their system, so that they appear to recover not by expulsion of a *materies morbi*, but by those changes which its presence had provoked coming to a necessary termination. The same view—that the expulsion of the poison is not the chief thing—is supported by the fact that persons susceptible of the disease may be exposed to its contagion and yet remain unaffected. The miasm is inhaled and enters the blood undoubtedly, but the powers of the system are too stable to be deranged by its pres-

ence, and it passes away again, having done no harm. The same seems to hold good of the poison of dissecting wounds, as Sir J. Paget tells us of his personal experience. A frame which has become inured to the poison from long continued exposure, is much less liable to suffer than one which is so to speak virgin, or has long been exempt from exposure. These facts seem to me of great significance, and harmonize completely with much other experience. I do not, however, mean to contend that it would not be very desirable to expel the poison from the system if it were possible to do so. But I question exceedingly whether we have more than a very limited power in this direction. Setting apart the promotion of pulmonary exhalation by the freest possible exposure to the opening, which might, I suspect, be more utilized than our own prejudices and those of the sick allow us to do, there are but few instances where we are able to do anything material in this way. We may, it is true, procure the excretion of some toxic material, but we remain infinitely far from ridding the system of the whole. Can we by any kind of treatment eliminate the cause of influenza, rheumatic, scarlet, typhus, or typhoid fevers? Can we entertain any reasonable hope of curing syphilis in this way? I am not speaking of causing the symptoms to disappear for a time, but of casting out the poison completely. In all these, and many like instances, the aim of therapy should be to counterwork the morbid agent, not to eliminate it. When a toxic matter has mingled with the mass of circulating blood, there is as little chance of removing it by art as of separating the drop of venom injected by the bite of a deadly snake. To attempt this we know would be worse than futile; we can not get rid of the venom, but by copious dosing with alcohol, or injection of ammonia into the veins, we may obviate its deleterious effects and save life. Our treatment of acute intoxications, as opium and belladonna poisoning, is essentially similar; as soon as we believe the blood to be entered, we employ means to counteract the impending arrest of vital functions, and lay aside all others. *Exchange.*

The Medical Value of Arterial Pressure.—Under this heading the "London Lancet" has an article from the pen of Dr. De Morgan, of South Africa, describing the remedial operation of pressure on the femoral and axillary arteries in certain cases in which it is desirable to diminish the supply of blood to the lungs. If the four arteries named be compressed so as to arrest the passage of blood, the circulatory fluid will back upon the heart, and there will be only half the full supply sent on to the heart for distribution through the lungs. With this theory in view, Dr. De Morgan set to work in its application in hæmoptysis and dyspnœa. The following cases will illustrate his plan of treatment:

Miss S. has spasmodic asthma every month. She came to my consulting-room in great distress. I applied my thumbs to both axillary arteries, and she expressed herself immediately relieved. Pressure was continued for about five minutes. Upon removing it the dyspnœa did not return for about ten minutes, when pressure was again applied, and she left with her breathing nearly natural, the dyspnœa this time not returning for some hours. Her friends, by my directions, compressed her arteries, each time affording her relief. She states that this was the severest, but shortest attack she has had, and that less bronchitis was left than usual.

W. S., an old missionary, aged seventy-six, has been failing since I first saw him one year ago. Has chronic bronchitis, emphysema, dilatation of the right ventricle, besides other complications. One evening in May last I was summoned to him in haste, as his friends feared he was dying. I found him sitting up in bed; orthopnœa extreme, face livid; hands plucking at the bed clothes; cough incessant. He had every door and window thrown open, and permitted no one to stand at his bedside. He just managed to gasp out that "I was too late this time." I applied my fingers to his axillaries alone, and in less than half a minute he expressed himself relieved. In less than two minutes he was thanking me in his old manner, and inquiring into the modus operandi of the means I used. The

pressure was removed after ten minutes, but the dyspnœa did not return. He began to cough up mucus more freely, and in a quarter of an hour fell asleep. On subsequent occasions, if pressure was removed too soon, he would start up, and cry out that "it was coming back," but was again tranquil upon its reäpplication.

The sequel of this case is interesting, as bearing upon this treatment. The following morning, whilst Mr. S. was turning in bed, he fractured a rib on the left side. I was sent for, and found him in great agony, the crepitation being audible to those around on each labored inspiration. Strapping and subcutaneous injection of morphia relieved him.

The following evening I was again sent for, this time to find him in a state of extreme cardiac apnœa; face deadly pale; pulse rapid and exceedingly compressible; respiration rapid; air entering freely into all parts of the lungs. Complained of a death-like feeling over præcordial region. Axillary pressure gave scarcely any relief. In fear and trembling, and feeling my way with small doses, I gave morphia, and this relieved the dyspnœa and procured sleep.

Subsequent experience in this patient's case, which ended fatally a few days after, convinced me that cardiac dyspnœa was not to be relieved in nearly the same degree as that of pulmonary origin, but in the latter relief was immediate and unfailing.—*Ex.*

Legislation against Syphilis and Prostitution.—The license system with its attending examinations and restrictions, having failed in European cities to extinguish syphilis, or to accomplish the benefits claimed for it, the advocates of legislation are proposing more stringent methods. At the Medical Congress of Vienna, Professor Sigmund foreshadowed the next phase of action on this subject in a paper read by him on the "Prophylaxis of Syphilis," the conclusions of which are reported in the "Gazette Hebdomadaire" of December 12th, in substance as follows: A stricter surveillance must be exercised by the police

over prostitutes in general (i. e. females) under rigid medical control. Medical inspection must be enforced, not only in military and marine bodies, but among the operatives, both male and female, in manufactories, and especially in all associations of laborers in which both sexes are engaged. All nurses and nurslings must be inspected, to whatever rank of society they belong; also suspected trades, as glass-blowers, musicians, enamelers, and cigar-makers. Special instructions on the means of preventing and curing syphilis must be given in adult schools and to corporations of laborers. The study of venereal disease must be diffused and popularized by special courses of lectures. Severe punishments must be inflicted on all prostitutes who do not apply for medical aid. Special hospitals for male and female patients must be provided, and the public funds appropriated for their support. International conferences and other means must be adopted to perfect the system of legislation.

Our reformers who are so desirous of introducing the European system here, will please notice the foregoing propositions, and consider the propriety of adopting them in California.—*Pacific Med. and. Surg. Jour.*

Caoutchouc as a Medicine — Chemistry run Mad.—Dr. Varick ("N. Y. Medical Record") has for fifteen years prescribed caoutchouc as a remedy instead of cod-oil. A solution is made in oil of turpentine, one part to two of the latter, and this solution is employed according to the following formula: ℞.—Sol. Caoutchouc f. ʒij.; Sacch. alb., ʒiss.; Mellis despum., f. ʒiss. M. A teaspoonful of this mixture, containing two grains of caoutchouc, is given two hours after each meal. Caoutchouc, we are told, exhibits by chemical analysis a proportion of carbon and hydrogen indicating remarkable adaptation as chemical food, and its therapeutic virtues are based on this view. Wonderful, indeed, must be its nutrient qualities, and preëminent above cod-oil and every other "chemical food," when six grains taken in twenty-four hours will fatten an invalid!

Alcoholic Drinks in England and Ireland.—Very few individuals would be ready to believe that the Irish people spend but half as much money, man for man, for intoxicating liquors, as the people of England. Yet such appears to be the fact. At the meeting of the Social Science Congress, Mr. Hoyle presented a carefully-prepared table showing the liquor returns, the death rate, and the pauper rate of the two countries for a period of five years. He adds: "The population of England squander in intoxicating liquors twice as much per head as the people of Ireland. As a result they have had, for the last five years, a mortality of 22.2 in 1,000 living in each year, while Ireland has only had 16.7 deaths in each 1,000 of her population. And, more remarkable still, England has 46.35 in the 1,000 supported on the poor-rate, paid by the industrious, the thrifty, and the sober. Ireland has but 13.3 in the 1,000 of her population paupers.—*Ex.*

A Defense of Hospitals.—In a lecture published in the "Medical Press and Circular," Dr. William Stokes, the distinguished Dublin Surgeon, combats the prevailing sentiment, that operations in large hospitals are attended by great fatality. After quoting the statement of Sir James Simpson, that the mortality after amputations in hospital practice is 1 in 2.4, and in private practice 1 in 9.2, and the statement of Erichsen that in the largest hospitals and under the best surgical treatment it is between 35 and 50 per cent., he declares that in St. Bartholomew's, in four and a half years, under Sir James Paget and Mr. Calender, there has not been one patient lost in thirty-five consecutive amputations. In the Richmond Hospital, Dublin, under his own care, during four years, there were but two unsuccessful results out of thirty-eight amputations. Dr. Stokes adds, that other eminent surgeons coincide with him in the belief, that large hospitals with proper hygienic care, afford much better conditions for success in operations, than private houses in general. He has not seen a case of hospital gangrene in the Richmond Hospital during the four years of his connection

with it. He considers that a large hospital presents all that is necessary for the best possible results, when the buildings are carefully constructed, with arrangements for good ventilation, pure air, plenty of light, an even temperature, a perfect system of sewerage, carefully cooked simple, but nutritious food, and skillful nursing. The statements made by Dr. Stokes, if borne out by other observers, will require a revision of the prevailing opinion in regard to the salubrity of large hospitals.—*Ex.*

Marriage of Consumptives.—Dr. Wozencroft's plan of stamping out pulmonary consumption might succeed if it could be put in force. But the idea of restricting the choice of partners in marriage, either by moral or legal power, is not practical. All that can be said and written against the marriage of consumptives is of no avail. The natural affinities of sex for sex set at defiance all prudential considerations. We have never been able to discover the great evil supposed to result from the marriage of consumptives. A short-lived progeny in individual cases is not of necessity a general evil. Longevity is not the chief end of man. There are many persons living of whom it might be said that it would have been better for the world if they had died young. Physically, consumptives are bad stock; morally, the reverse. We are not sure but that the morals of mankind would be improved by an increased proportion of this class.—*Ex.*

Chloral Hydrate in Puerperal Mania.—A case is reported in "Tilden's Journal of Materia Medica" for November, 1873, in which, after two weeks of violent insanity, treated without permanent benefit by other sedatives, the disease yielded promptly to chloral hydrate, 20 grs. every two hours till 60 grs. were taken.—*Ex.*

CLINICAL RECORDS.

"Ex principiis, nascitur probabilitas: ex factis, vero veritas."

ART. I. — INFLAMED IRREDUCIBLE HERNIA, FOLLOWED BY FÆCAL FISTULA. By W. B. DRINKARD, M. D. Washington, D. C.

The history of this case may be briefly summed up as follows:

Two years ago I was called to see Mrs. L., aged ——, on account of an oblique inguinal hernia on the right side, which had become strangulated, and which, having been reduced with some little difficulty, had since then given the patient no serious trouble, until the 5th of March last. On this day, being again summoned, I found that Mrs. L. had persistently neglected wearing a truss, and violent exertion in moving furniture about had, prior to my visit, caused a re-descent of the hernia. The symptoms of strangulation were sufficiently evident. Moderate taxis failing to reduce it, a hypodermic injection of morphine was given, a large enema ordered to be administered, and the patient left to herself until the next day. On the next visit (May 6) the general symptoms seemed somewhat better, and the tumor less painful. Taxis was again attempted, but, as on the preceding day, succeeded in emptying the tumor of a portion of its contents, and rendering it less tense, without, apparently, any real approach to reduction. I now began to have doubts as to the prior reducibility of the tumor, but no exact account could be obtained of the condition of things before strangulation: all I could learn was "that the patient did not think the tumor ever disappeared entirely." Ice was applied over the hernia, large enemata ordered night and morning, and one-eighth of a grain of morphine given every three hours. On the evening of the 6th the condition was unchanged, but on the 7th the symptoms were again aggravated; this time, however, unmistakable stercoraceous vomiting being added to the symptoms at first existing—nausea, hiccough, swelling and tension of the tumor, pain and sensitiveness of tumor and abdo-

men. In the evening I visited the patient with the intention of again attempting taxis, under chloroform; but the symptoms enumerated above being somewhat mitigated, and the patient at the same time extremely weak, I was convinced that it would only be proper to use the anæsthetic in case I intended to proceed immediately with the operation should taxis again fail in effecting reduction, and therefore deferred it, being, for obvious reasons, anxious to put off the operation in this case to the latest possible moment.

On the 8th Dr. Liebermann saw the patient in consultation with me, and after thorough examination of the case and its history, concurred with me in the belief that the hernia was irreducible, and advised abstention from operation until either the symptoms became more permanently violent, or the patient's weakened condition imperatively demanded the intervention of the last surgical resort. He also advised the repetition of large enemata, with the long stomach-pump tube. The pulse was 102, tolerably soft; no vomiting since the night before; great thirst; tongue brown and dry; some inclination to take food; hernial tumor still painful on pressure; abdomen less painful and tympanitic.

The morphine was reduced to one-twelfth of a grain every three hours; iced brandy, and beef tea, alternating with iced milk, in small but repeated doses, continued as before. That night I gave the enema myself, in the manner suggested; the tube met with fæcal obstruction twelve inches up, but the injection produced no result. The same insuccess attended similar results on the 9th and 10th. On the 11th a compound colocynth enema (Extract Colocynth, ℥ss., and Sapo. Mollis ℥j, in a pint of warm water) brought way the first stool since the date of strangulation. Small feculent discharges continued for the next two days, with evident relief to the general condition, but with little effect on the size or degree of tension of the tumor. On the 14th this latter began again to be painful; this time, however, the pain being more superficial and diffused. The signs of inflammation continuing, local applications before

used, and already discontinued since some several days, were substituted by warm fomentations.

March 19th.—The tumor was tense, livid, giving a hydroæric sound on percussion, and with evident superficial fluctuation. Thinking that I had now given sufficient time for the formation of limitary adhesions between the bowel and superjacent tissues, seeing that perforation was imminent, and fearing that the abscess might cause further and more serious trouble if left to itself, I incised it freely, over its most prominent and fluctuating point. A gush of pus and fæcal matter, with the discharge of considerable flatus, followed the incision, filling the whole room with an intolerably fœtid odor. I ordered a carbolic acid and glycerine lotion, with a thick pad of lint over it, to imbibe the discharge; enjoining frequent repetition of the dressings, and the most scrupulous cleanliness that circumstances furnished. At the same time I increased the quantity of the patient's nourishment, put her on stimulants—brandy, bark and ammonia—with an opiate at bedtime only.

It is unnecessary to follow out the details of a protracted and by no means pleasant routine from this time. About the 2d of April the patient was entering well into convalescence; little by little the opening into the abdomen and gut contracted, until only a small fæcal fistula was left, about the calibre of a crow quill. On the 14th the bowels acted spontaneously for the first time in two weeks, and have continued to do so ever since that date. On the 10th I attempted, as a preliminary measure, to close the fistula by bringing its edges together with sticking plaster; but, whether as effect or coïncidence, the attempt was followed by so much pain in the iliac fossæ, with such profuse diarrhœa, that I was forced to leave the opening to heal itself, aided by position and an occasional cauterization with nitrate of silver around its abraded orifice.

(The patient's health and strength slowly but permanently improved. Late in June she was able to sit up with comfort, and even move herself about the room a little. At present date, August 14th, the fistula seems to be entirely closed; there

is no discharge, and the general health is satisfactory). Such is the brief history of a case which may be shortly stated as one of irreducible hernia, becoming strangulated; and which, after a trial of the orthodox means of reduction, was left to itself more or less, until the indications of inflammation demanded the treatment appropriate to that condition, finally necessitating opening the hernial abscess, and leading subsequently to the formation of a fæcal fistula. The general condition and the result of the case indicate sufficiently that the hernia was not simply incarcerated. The point of interest in the case turned upon the question, was the hernia reducible, or not, prior to strangulation? The belief that it *was* once established, there was really nothing to do but to guide the case to its termination according to the indications presented in its march, putting aside all thought of relief by an operation for the strangulation.

In connection with the subject of strangulated hernia, I desire to call attention to the use of hypodermic injections in these cases. In three, when taxis was unavailing, I have found reduction readily and painlessly effected by the injection of from one-fifth to one-fourth of a grain of morphia, with one-eightieth to one-sixtieth of a grain of atropia. The remedy is simple, and at the same time so rational, that it is certainly deserving of more extensive trial. In the present case I chanced only to use the morphine, although I of course have no idea that the result would have been different had the atropia been added.

ART. II.—NEURALGIA, SUPERANÆSTHESIA, PERSISTENT. By G. BEAUMONT, M. D., Dallas, Texas.

Person, aged fifty-five, dark hair, five feet eight inches high, heavy build, enjoyed fair health until about 1868, at which time he was attacked with facial neuralgia, involving both deep-seated and superficial nerves of right side. Being a physician,

he treated himself for some time, but finding no relief, he applied to the best medical skill within his reach, but to no purpose, the pain gradually but surely growing worse. After suffering for about four years, I was called to see him, and found him suffering the agonies of h—l, as he expressed it. It is impossible to give anything like an accurate description of this poor man's suffering. At times he would suffer with a burning sensation on the inner side of the cheek, as though there were hot coals of fire being applied. This patient remained under my treatment about one year. I used the iodides, bromides, strychnia, arsenic, belladonna, Indian hemp, conium, etc., pushing all of them as far as it was safe, resorting at the same time to the hypodermic injection of morphia. The injections would give temporary relief; the strength had to be increased every few days, until from one to one and a half grains was used at a time. I used the injections fully five hundred times in the face. I also used the sulph. atropia and morphia hypodermically, with but temporary relief. I also used locally the aconite liniment, gelseminum internally. During all this time the patient was not relieved entirely of pain. We then resorted to electricity, and gave it a trial of six months; also using during this time the morphia injections, constitutional treatment, etc. After all the above and other remedies being tried and failing, the patient determined to visit Professor Gross, whose pupil he once was. I gave it as my opinion that an operation or section of the nerve would not be of any permanent benefit. On his arrival at Philadelphia, Professors Gross and Pancoast thought an operation would surely cure him, and accordingly operated, removing a section of the superior and also of the inferior maxillary bones and nerves, dissecting out some of the facial nerves, causing quite a deformity, with not the least particle of relief from his sufferings.

Dr. Hammond, in his admirable work on "Nervous Diseases," says when neuralgia comes on in the after part of life, there is no cure for it; also that operations are worse than useless. It is my opinion that this patient will go to his grave unrelieved,

suffering on earth the tortures of the damned; a sad commentary on *physic* and *surgery*.

ART. III.—PISTOL BALL THROUGH THE BRAIN—RECOVERY WITHOUT CONSTITUTIONAL DISTURBANCE. By R. F. BALDWIN, M. D., Winchester, Va.

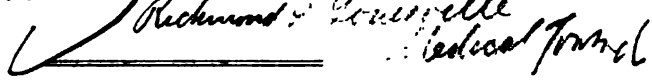
In the spring of 1861 I was called to see a youth, sixteen years of age, who received a ball from the accidental discharge of a Colt's parlor pocket-pistol in the hands of a companion a few feet distant. The ball, about the size of a buck-shot, entered the right frontal bone an inch above the centre of the eye-brow, and passing through the brain, lodged in the occipital bone near the centre of the occipital cross. I was called in to the case by my uncle, the late Dr. R. T. Baldwin, and in making his examination as to the character of the wound, he introduced a silver probe into the orifice and permitted it to fall (the boy lying upon his back) by its own weight, until it reached the *centre of the brain*, when he cautiously withdrew it, without coming in contact with the ball, showing conclusively by the direction the probe assumed and the facility of its passage, that it had passed through the brain and lodged at the point indicated.

Upon the receipt of the shot, the boy fell with tremendous force upon his back, but did not lose consciousness for a moment, but expressed great anxiety as to the result.

As a precautionary measure, the lad being in full health, I bled him some hours after the accident, and his bowels were kept free with a solution of Epsom salts. The wound healed rapidly without the development of the slightest constitutional disturbance, and in ten days he returned to his home in Augusta county, Virginia.

In the spring of 1862 he enlisted in the Federal service, where he remained until the close of the war. He is now re-

siding in Maryland, and as far as I can ascertain, has never been incommoded in the slightest manner by this most extraordinary occurrence.



ORIGINAL CORRESPONDENCE.

"Sit mihi Fas scribere audita."

Notes of Two Novel Cases in Surgical Practice.

Marengo Co., Ala., April, 1874.

Dear Dr. Gaillard:

Our Profession is one in which its accumulations of fact and experience make us rich beyond the devotees of all others. Year by year the great reservoir of truth and knowledge is becoming more ample in its results, for each votary, whether he be learned in all the details, or a mere sciolist in some of the simplest of our truisms, can, and does, add something to the stores of medical information. For medicine, more than all the other professions and sciences, ignores nationality and political lines of demarcation, and lives, moves, and has its being in a republic of its own. Thus, then, I furnish you, with these accompanying notes, of two cases which came under my treatment and observation.

Case I.—Mrs. D., a lady of this county, sanguine temperament, married, multiparous, after a day of unusual exercise for her, noticed the advent of her monthly sickness, although it was ten days beyond the usual period, and all her life she had been noted for the perfect regularity and limited amount of this function. On this occasion it was excessive, and she stated that clots of large size began to form in the vagina. She was compelled to take her bed within three days, and for *four weeks* there was a profuse discharge from the uterus, she growing rapidly weaker and exsanguinated each day.

The previous history of the case was this: For several suc-

cessive summers she had suffered from severe and prolonged attacks of purpura hæmorrhagica—certainly of malarial causation. This spell of uterine hæmorrhage was but the sequel to a painful attack of several months' duration that very summer (it was now in November), and I decided that the purpura was directly responsible for the present outbreak. From the first I urged injections of the cavity of the uterus, such as there was, with some good astringent, but was overruled. In the meantime, all of the usual and many of the unusual remedies in such cases were faithfully employed, and without the slightest benefit. The patient soon became as white as a bleached lily, exsanguineous, and so defibrinated had become the blood crasis, that all the functions seemed in abeyance. There was continued nausea, could not even retain cold water upon the irritable stomach. For three weeks she was nourished with gruels, broths, etc., given per enema with Davidson's syringe. Her condition on the twenty-eighth day was pitiable in the extreme; seemingly bloodless, mind wandering, speech incoherent. I now insisted on the following operative procedures: I made a saturated solution of alum, and taking a No. 9 silver male catheter, bent to the proper curve, (with the assistance of Dr. C. C. Garrett, a most accomplished physician of this county,) an ounce and a half of the alum solution was injected by the Davidson syringe, and repeated in a half hour. The flow ceased as if by magic, nor was there the least return of it. I had anticipated uterine colic or some other trouble from the injection, but there was none. As a matter of course the patient improved slowly. A week after the resort to the uterine injection, she was able to tolerate a little liquid food on her stomach; improvement was then more rapid. There was much trouble from dropsical effusion, particularly œdematous, but a trip to the Carolinas, generous diet, iron, etc., promoted complete and lasting recovery. Three months from the time she was able to walk about, her menstrual function was resumed.

The outlines of this case and all its previous history go to

clearly prove that this hæmorrhage was merely the purpuric sequel, for it was a hæmorrhage from the inception, as proved by the clots, etc., the uterus happening to be the outlet.

In this scope of country lying and forming the large delta between the Alabama and Bigbee rivers, there is much of the purpura hæmorrhagica occurring in systems prone to malaria. There can be no doubt that there are types of purpura clearly traceable to malarial origin, which will disprove the assertion that it is altogether scorbutic. I have seen much of it during a residence of four years in the "Black Belt," and in my observation it only occurred where there was cachexia from malarial trouble and great perversion of sanguification and nutrition. The anatomical lesions, too, go to prove this, the remarkable degree to which the blood is defibrinated, and the enlarged and indurated condition of the spleen in every case.

Whatever a sound *rationale* will suggest for the proper treatment of such cases, I wish to put on record my method of prophylaxis, when purpuric symptoms have supervened. In my humble opinion, this will do more than all else—viz., the cold shower-bath every morning on rising from bed, and the muriated tincture of iron in large doses. These remedies in conjunction are indeed a *sine qua non.*

Case II.—In a rencounter which occurred near Linden in the early morning of October 21, 1873, between a Mr. W. and a negro man named Sam, the latter was shot twice, then grasping an axe, struck Mr. W. on the right parietal bone, killing him almost outright. The negro started to walk into Linden, a distance of three miles, but growing too weak he was brought in a buggy and lodged in the jail yard. Calling in to see him, I found him pale, cold, cadaverous, and to all appearances *in articulo mortis;* pulse intermitting and frequent; vomiting pure blood.

On examining his wounds, discovered that one ball from a large Colt's pistol had entered at Scarpa's triangle, missing the femoral artery by a hair's breadth, glancing around the femur, and lodging in the tissues posteriorly, from whence a stroke of

the bistoury released it. The second ball entered from a lateral direction, near the right nipple, and ranged downwards and backwards. He complained of great pain in the left lumbar region, and declared he could feel the ball. He had been in perfect health; had eaten no supper the night previous, and no breakfast that morning. Careful percussion over the thoracic parietes revealed no collection of blood in the pleural cavity. At intervals of about an hour, he would vomit pure blood, averaging a half pint each time. His extremities were very cold; I had him warmly covered and allowed him cold water by the mouthful. On the second day he passed a quantity of bloody urine, and had an action from his bowels, in which there were clots of blood adhering to the scybalæ.

On the third day he began to reäct, and ceased to complain of the pain in the left lumbar region. He began to eat something. The vomiting of blood ceased on the second day. The urine continued to be charged with blood for several days. His recovery was rapid, and of what I might term the "first intention."

The strange feature about this case is, that there was never the slightest disposition to any febrile excitement. I was on the constant outlook for some premonition of gastritis, for the ball had clearly penetrated the stomach. I had looked for some pleuritic trouble, for it had coursed through the right thoracic cavity and diaphragm on its way downwards. I expected some symptom of approaching peritonitis, but was agreeably disappointed. The intestines, like the stomach, must have been cut through, as showed by the undigested clots of blood passed per anum; and the left kidney must have been injured, else whence came the bloody urine. This must have accounted for his great pain complained of in the left lumbar region, and it is in the direct line of fire.

This man was shot in very clear, cold weather; the stomach was, and the intestines nearly, empty. So complete was the shock that he did not reäct under three days. He lost a quantity of blood by emesis. Could not all this, then, have, as it

were, aborted any disposition to pleurisy, gastritis, peritonitis, etc., which was almost certain to supervene in cases far simpler? I think this was clearly a case in which such abortion did occur; partly from the empty condition of the abdominal viscera, the remote period of reäction, and the copious emesis of blood, carrying out the full effect of a venæsection.

I recollect, while a student in the office of my preceptor, Prof. Paul F. Eve, of Nashville, during a cold day in January, 1867, that an outcast came in and asked him to do something for him. An examination revealed a severe wound in the right breast from a pistol ball, shot from the front, three days before. There had been no surgical fever, and he declared he felt no pain; there had been some hæmoptysis; he had been exposed to extreme cold, and his condition bespoke a limited supply of food. Under the circumstances, this should be an analogue to the former case, in which coïncidences abort inevitable and dreaded symptoms and promote rapid recovery.

T. C. Dow, M. D.

OAKLAND, TEXAS, February 21, 1874.

Prof. E. S. Gaillard:

Dear Sir,—A gentleman, thirty-five years of age, had his hand lacerated by the saws of a gin in December, 1872. All the soft tissues of the dorsal aspect of the hand from the wrist-joint to the metacarpo-phalangeal articulations were torn off. Four saws, an inch apart, penetrated from the palmar surface, the whole length, nearly through the dorsum, severing both palmar arches; the index finger was split from tip to base antero-posteriorly, the middle and ring fingers were literally torn to fragments from their extremities to the first phalangeal articulations, and of course required disarticulation at these joints. The little finger was badly lacerated. There was alarming hæmorrhage from the palmar arteries, controlled by a billiard-ball tightly bandaged to the palm. With this exception he has made a good recovery, having a useful hand, deprived only of a portion of the middle and ring fingers.

Yours, etc., H. C. HARRIS, M. D.,

BALTIMORE, April 11, 1874.

Dr. E. S. Gaillard:

Since the invention of Sims' duck-bill speculum and the placing the patient in the knee, elbow and semi-prone positions, many bivalve specula have been presented to the Profession; many have been laid aside, and only serve to fill the case of the instrument-makers, or be exhibited by the professor to his class. Nearly if not all have been the productions of physicians who have devoted themselves to the diseases of females as a specialty, to meet the difficulties or surmount the obstacles which have presented themselves in his own clinic. The needs of the specialist and those of the general practitioner are very different. The former has his trained nurse or assistant at hand, his table and light arranged to suit him, and a variety of instruments from which to select the one most suitable for his immediate case. The latter will have, as a rule, no help; but one instrument to use in all cases, and to examine his patient with such light as the room affords. The accompanying speculum is offered by a general practitioner, as one he thinks most suitable to general practitioners, as one that will supply their needs better than others now in use. In it no great merit of invention is claimed, but only the adaptation of the good points in other instruments and their combination for the use of the physician in his every-day practice.

In its construction the duck-bill shape of the blades has been preserved, the blades are differently shaped from those of other instruments, open widely at their vaginal extremity, and easily bring the neck of the uterus into view. The fenestra is large and wide for the more easy use of the sound or applicator, and the external orifice is much larger than in other instruments, giving the physician a better view and affording him more space for the use of instruments.

Keeping in view that the physician in general practice needs an instrument that will answer for all purposes, this speculum has been so arranged, that by removing the screw at the side and reversing the upper blade, it can be readily changed into

an ordinary Sims speculum, as available and useful as that. It is therefore offered to the Profession as a speculum which, for general use, will answer all purposes and furnish the physician with a double instrument at a moderate price.

The drawings will explain themselves. Fig. 1 shows the instrument closed, the shape of the blades not only facilitates the introduction of the instrument, but when open does not press so severely on the urethra and fleshy bodies as the straight blades.

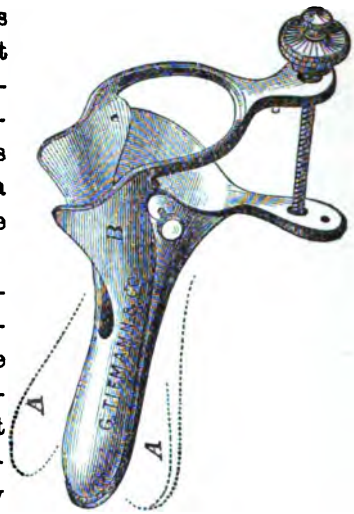


Fig. 1.

The dotted lines A would show the blades expanded, the extent of surface brought into view will be readily appreciated.

Fig. 2.

Fig. 2 shows the instrument converted into a Sims speculum.

This instrument can be obtained from Charles Williams, Instrument maker, North Howard Street, Baltimore, Md.

Respectfully, GEORGE G. BREWER, M. D.

MACON, MISS., April 7, 1874.

Dear Doctor:

At the meeting of our State Medical Association, in Columbus, last Wednesday, the Secretary read a letter, and had on his table a roll of printed circulars from Dr. Jerome Cochrane, of Mobile. It requested that the circulars be distributed among the members of the Association, intimating that we ought to take some action in regard to the controversy between you, Prof. Kinloch, and Cochrane. I did not read one of the circulars, but saw that they were very large, closely printed, and signed by Prof. Kinloch. I denounced the whole thing as an imposition upon the Association, a reflection upon our dignity and sense of duty; and tried to pass a resolution of condemnation, but the Association thought it best to treat the matter with silent contempt. I remarked that I knew something about the controversy, and regarded your course in it as commendable and proper; and that I thought it an unusual subterfuge to try to injure a professional brother and his Journal in the estimation of physicians of this State, by resorting to the course this gentleman adopted. I thought it due you to know of this thing, although it is not a matter of much importance, and will evidently recoil upon the authors of it. I had rather you would not connect my name with any notice of it, unless you think it absolutely necessary. Yours truly,

——— ———.

P. S.—From the effect of this piece of meanness upon the members, so far as I observed, I am satisfied that it will redound to your interest; for there was a general expression of indignation among them. ———.

NOTE.—The above letter is from a former President of the Mississippi State Medical Association. It will be remembered that the Faculties of the Mobile (Ala.) and Charleston (S. C.) Medical Colleges offered, in their last catalogues,

"free medical instruction" to medical students. This "free instruction" is as follows: Instead of charging each student the universal matriculation fee of $5, the Mobile College charges $25 for its matriculation fee, charging nothing for its college tickets; while the Charleston College charges $20 for its matriculation fee, and charges nothing for its tickets. This exceedingly unworthy device was freely and fully exposed in this Journal, and is not only a mere sham, but is an indirect method, under the guise of free teaching, of abstracting from each student from $20 to $25 for college tickets; the respective Faculties protesting all the while against low fees, and claiming to be giving "a free course of medical instruction." The device was proved to be a charge of $5 for matriculation and a charge of $20 to $25 for college tickets. The Dean of one College (S. C.) endeavored in this Journal to defend his course. He was easily discomfited. He asked space for another defence. This was accorded to him. He sent for publication a gross, unjust, and personal attack on the colleagues of the editor of this Journal. It was refused, and the author published it in a Charleston daily newspaper. A reply to this was under a most specious pretext unfairly refused to the editor of this Journal by the editor of the Charleston newspaper, who allowed Dr. Kinloch unlimited space. Dr. Kinloch, the Dean of the Charleston College, was severely denounced by the colleagues of the editor of this Journal, and he was then repudiated as unworthy of notice. Himself and Dr. Cochrane (another Dean), of Mobile, have prepared circulars, untrue and personal, and are striving to have them received, read, and accepted by State Medical Societies. The Mississippi State Medical Society has done what all Societies (now warned) will do; viz., treat them with just and severe contempt. Gentlemen usually make a fair, open and unconcealed contest, but this secret effort to so thrust circulars upon physicians, as to conceal the attack and strive for an unfair and petty victory is unworthy indeed. The authors of this bold and honorable campaign have sustained a crushing defeat, and received a full complement of official contempt. They should try another State Society. Mississippi physicians will not tolerate such devices, and those in other States are equally fair and honorable.—Ed.

New Ulm, Texas, March 30, 1874.

Dr. E. S. Gaillard:

Dear Doctor,—Seeing a letter from Dr. T. J. Turpin, of Alabama, in the September No. of your Journal, in which he reports a craniotomy case, the operation being performed with a cotton-hook and butcher-knife, recalls a case that occurred in my practice not long since, in which the cotton-hook was also used, but for a different purpose.

The case was one of twins, the first child presenting by the

breech. In consultation with Dr. Bouldin, it was agreed to use the cotton hook, it being the best substitute for the blunt hook that we could think of. The sharp point of the hook having been filed blunt, and the handle made shorter, it was inserted in the groin and the child extracted; the hook was wrapped with a soft rag. Before using the cotton-hook we gave the fillet a fair trial.

The second child was a footling, and was soon delivered. There was no damage done the one extracted by the hook. The patient was a robust mulatto woman, the mother of a large family. She made a good recovery.

The case is one that illustrates how often we country doctors must tax our mechanical ingenuity to devise means to alleviate the suffering of our patients, living, as we do, so far from instrument-makers.

Respectfully,

R. B. STOCKTON, M. D.

CALEDONIA, TAXAS, March 25, 1874.

Dr. E. S. Gaillard:

Dear Sir,—Having met a case of puerperal eclampsia a few days ago which chloral so readily relieved, I would like to add it to the one reported by Dr. Field, in the January number of your Journal.

At 11½ A. M., March 18, 1874, I arrived at the house of Mr. P., to attend his wife, a primipara, in her labor. I found the os opened to the size of a Mexican silver dollar. The womb was contracting with considerable violence. The pains were recurring at very short intervals. Having satisfied myself as to the condition of her bowels and bladder, I made a careful exploration to ascertain the position of the child's head. Its forehead was presenting to the mother's right acetabulum. At 1½ P. M. she was delivered of a healthy child. The placenta I removed half an hour after. At 2 P. M. she began to complain of headache and diminished vision, and by the time twenty minutes had passed, she was totally blind. One hour after the convulsions came on. At first they were mild, merely

twitching of the muscles. I immediately put a boy on a horse and sent to my office, a short distance off, for a bottle of chloral. But before he could return, she was having frequent and extremely violent convulsions. Three or four would recur in quick succession; then, after an interval of ten or fifteen minutes, they would again commence, the severity increasing with every paroxysm. I was preparing to bleed her, being afraid to wait longer, when the messenger arrived with the chloral. As soon as possible I gave her grs. xx. and then repeated the medicine, grs. x. doses, every fifteen minutes. For the first hour after that time I began to lengthen the intervals, varying them a half to two hours. I thus administered the chloral all night. Mrs. P. had only two comparatively slight convulsions after I commenced the use of the chloral.

Next morning she was so much better I thought it best to discontinue the medicine. In the afternoon ordered her a dose of castor oil. This was her whole treatment. She is now doing as well as could possibly be expected.

One other case I met with about six months ago, and in that, too, chloral brought relief, though not so quickly. I attribute that to its being given in smaller doses.

Very respectfully, ROBT. E. JONES, M. D.

PROCEEDINGS OF SOCIETIES.

"Etsi non prosunt singula, juncta juvant."

KENTUCKY STATE MEDICAL SOCIETY—NINETEENTH ANNUAL SESSION.

Society met at Shelbyville, Ky., April 7. Convened at 12 M., President J. W. Thompson, of Paducah in the chair. Dr. J. A. Larrabee, of Louisville, Secretary, and Dr. L. B. Todd, of Lexington, Treasurer. The First Vice-President, Dr. James M. Keller, of Louisville, and the Second Vice-President, Dr. R. M. Fairleigh, of Hopkinsville, occupied seats on the rostrum.

The following members were present: Drs. T. J. Griffiths, William Bailey, Lewis Rogers, W. O. Roberts, J. A. Ireland, D. S. Reynolds, W. T. Owen, J. J. Speed, L. P. Yandell, Sr., E. S. Gaillard, of Louisville; S. A. Foss, of Lacona; Charles Mann, of Nicholasville; S. P. Craig, Standford; W. W. Cleaver, Lebanon; E. McClellan, U. S. A.; J. Hill, Owensboro; C. P. Mattingly, Bardstown; George Beeler, Clinton; J. D. Jackson, Danville; D. N. Porter, Eminence; W. H. Beard, Christiansburg; W. E. Ryan, Simpsonville; J. Smith, Lexington; J. D. Newkirk, Bedford; James Lowry, R. F. Logan, J. Baker, D. Slaughter, H. M. Long, of Shelbyville.

Dr. James Lowry, in an appropriate speech, welcomed the visiting members.

Committee on Credentials was then appointed, as follows: R. F. Logan, J. J. Speed, McNary, Porter and James Smith. Adjourned to meet at 3 P. M.

AFTERNOON SESSION.

The following new members were then elected: S. E. Winn, J. W. Ishmael, M. S. Brown, J. H. Letcher, W. M. Hanna, B. Letcher, P. Guntermann, W. H. Long, J. G. Webb, E. S. Swain, W. Chenault, C. F. Keeney, A. Toon, R. B. Cassaday, J. H. Speer, C. S. Fenner, J. J. Callahan, J. S. Ford, D. O'Nace, W. S. Ryan, H. Bishop, R. H. Chilton, C. Widney, J. Holloway. Dr. J. M. Woodworth, Superintendent of United States Marine Hospital, recommended by Drs. T. J. Griffiths, E. McClellan, and E. S. Gaillard, was elected an honorary member.

Dr. Andrew McFarland, of Illinois State Medical Society, was introduced and welcomed. He made a neat and appropriate speech. Annual report of Recording Secretary was then read and adopted; the Society warmly appreciating the arduous, faithful and efficient services of this most excellent officer, Dr. J. A. Larrabee, of Louisville, Ky. The regular committees made few reports; most appointed failed to do so. Special committees were very derelict. Dr. James M. Keller asked time in which to complete his report on immovable dressings. (This report will be long and exhaustive, and a valuable addi-

tion to the Transactions of the Society and to medical literature.)

Dr. McClellan, U. S. A., read an elaborate report on uterine fibroids. Dr. R. F. Logan presented his report on surgery. The Librarian, Dr. D. S. Reynolds, made a report of his arduous and difficult duties as librarian. Dr. L. B. Todd, the worthy Treasurer, read his report on finance. Dr. L. P. Yandell, Sr., read specimen extracts from his unfinished paper on the Medical Literature of Kentucky. The reminiscences, and historical facts are valuable and interesting, and the paper will be a real acquisition to the medical literature of the State.

Dr. McClellan stated that the principles of Esmarch's operation were first suggested thirty years ago by a Kentucky physician, Dr. Mosby. (Sir Charles Bell first suggested it.—ED.)

Dr. J. D. Jackson, of Danville, presented resolutions of the Boyle County Medical Society in regard to the providing of a monument for Dr. Ephraim McDowell. A committee consisting of Dr. J. D. Jackson, J. M. Keller, E. McClellan, and J. Meyer were appointed to act, and were given full power in arranging all details and enlarging the committee as they may deem best.

Committee on Nominations was then appointed. Adjourned to meet at 7 P. M.

EVENING SESSION.

Dr. James M. Keller in the chair. Committee on Nominations enlarged.

The address of the President, Dr. Joseph W. Thompson, was then delivered. It was much admired and appreciated for the excellent presentation of many practical and important subjects.

Dr. J. J. Speed then delivered his address, "Has Medical Science Advanced?" This paper showed much research and reflection; the diction was polished and the material excellent.

Dr. Edward Richardson next read a paper on many medical abuses needing correction. This paper was practical and caustic. Adjourned until 9 A. M.

SECOND DAY.

Society met at 9 A. M.; minutes read; very accurate; approved.

Secretary presented memorial resolutions in regard to the death of Dr. Henry Miller. Appropriately referred to Committee on Necrology.

Dr. A. B. Cook was restored to membership, Society rescinding previous action taken at Covington, Ky.

Dr. Ireland presented a paper on Rational Medicine from Dr. J. L. Cook, of Henderson, Ky.

Committee on Nominations reported as follows: President, J. Baker, Shelbyville; First Vice-President, George Beeler, of Clinton; Second Vice-President, J. Y. Newkirk, of Bedford; Recording Secretary, J. A. Larrabee, of Louisville; Corresponding Secretary, R. F. Logan, of Shelbyville; Librarian, J. J. Speed, Louisville; Treasurer, L. B. Todd, Lexington; Publishing Committee, W. F. Owen, W. H. Galt, R. H. Gale, of Louisville.

Dr. Baker, the new President, was then introduced, and made a few brief, appropriate, and well-delivered remarks.

Henderson (on an invitation extended by telegraph) was selected as the place for the next meeting. The invitation was presented by Dr. J. G. Letcher, of Henderson, and he was made chairman of the Committee on Arrangements.

Dr. Lewis Rogers presented a paper on California as a place of resort for those suffering from pulmonary consumption.

Dr. Gaillard presented a paper on cerebro-spinal meningitis, and exhibited photographs of an entozoön, rarely seen in this country, the tricocephalus dispar. The photograph represented one of many of these parasites found in a patient attended by Dr. J. A. Larrabee, of Louisville, Ky.

Dr. Andrew McFarland, of Jacksonville, Illinois, then read a paper on the "Medical Border Land." This paper will be published in the Transactions.

Dr. David Yandell read an abstract of a report of six cases of ovariotomy performed by himself.

Dr. Foss read a report on Registration. He was thanked for his arduous labors in this connection, and continued as a special committee on this subject.

Drs. N. F. Nash, J. M. Howard, and C. J. Renfro were elected members. Dr. Larrabee was made ex-officio member of Publishing Committee.

Society adjourned to meet at 2 P. M.

SECOND DAY—AFTERNOON SESSION.

Members desiring to be appointed delegates to the Detroit meeting of the American Medical Association were requested to hand their names to the Secretary. The following members were appointed delegates: Drs. E. M. Skillman, J. M. Keller, R. H. Gale, D. S. Reynolds, T. J. Griffiths, D. N. Porter, D. D. Carter, J. A. Larrabee, S. B. Todd, J. A. Octerlony, E. McClellan. The President's name was, by motion, added to the list.

Dr. J. S. Reynolds read a paper on Diseases of the Conjunctiva. Dr. Larrabee a paper on the Summer Complaints of Children.

Dr. Lewis Rogers presented resolutions asking the aid of this Society in advancing the claims of the Medical Department U. S. A. to proper position and recognition. Adopted.

Dr. D. N. Porter, of Eminence, offered the following excellent resolutions. (NOTE.—Bundles of the "Courier-Journal," a daily newspaper, containing a two and a half column article of mis-statements and falsehoods in regard to the editor of the "Richmond and Louisville Medical Journal," and over the signature of J. M. Holloway, M. D., of Louisville, Ky., had recently been sent into the State Medical Society and distributed.) The official record is as follows:

Resolved, That the common practice of physicians of appearing in the public newspapers of the day can not be too strongly and unhesitatingly condemned, as unbecoming our learned and honorable Profession.

Resolved, That any member of this Society who shall appear in a newspaper logomachy, after this date, will expose himself to the danger of censure with the purpose of expulsion, for this non-professional and reprehensible practice.

Resolved, That physicians as physicians be kindly requested to write for medical journals only.

"A rising vote was taken, resulting in the unanimous adoption of the resolutions."

On motion of Dr. R. F. Logan, it was resolved that the Legislature be asked to so modify the recent law enacted in connection with pharmacy as to control by law all persons in Kentucky who compound medicines.

On motion of Dr. S. A. Foss, it was resolved that this Body thank the Legislature for their recent law in regard to the suppression of quackery in the medical and pharmaceutical fields.

Dr. R. H. Gale read a paper on Calculus of the female bladder, illustrated by cases and specimens.

Dr. Gale offered appropriate resolutions in regard to the death of Drs. Henry Miller, W. T. Humphrey, G. W. Bayless, and R. H. Rudd. A committee, consisting of Drs. R. H. Gale, J. J. Speed, and Wm. Bailey, were appointed to prepare proper memoirs.

Dr. Wm. Bailey read a paper on albuminuria; Dr. F. C. Wilson a paper on oxygen gas; Dr. C. C. Fenner a paper on glaucoma of the retina.

Committee appointed to prepare a memorial on the death of Dr. Paul Rankin continued.

Dr. Larrabee moved to have the President's address published in the newspapers. Carried.

Dr. Gunterman, Secretary Medico-Chirurgical Society of Louisville, read an admirable résumé of the professional work of this Society in the past year. The report and the material composing it were much complimented.

Dr. McClellan moved that this excellent feature be adopted by all other Societies. Carried. He also moved an additional levy upon members, if necessary, for the publication of a creditable volume of Transactions. Carried.

Communications—Drs. W. W. Dawson, of Cincinnati, Ohio, and H. M. Skillman, of Lexington, Ky., offering congratulations and compliments, etc. Received and referred.

The usual standing and special committees were then appointed.

Proper resolutions of thanks to the officers of the Society, to the citizens and physicians of Shelbyville, and to the railroads being passed, the Society adjourned to meet at Henderson, Ky., on the first Tuesday in April, 1875.

NOTE.—Having been appointed a special committee to report on the Aspirateur in the treatment of medical and surgical diseases, I will be under many obligations to all physicians, who have used this instrument, for every fact of interest known to them, and for a report of cases in which the instrument has been used. These cases will be published, and all information given will be publicly acknowledged. Thanks are offered to Dr. Larrabee for this Report.—ED.

CHEMICAL AND PHARMACEUTICAL.

"Diruit, ædificat, mutat."—HOR.

Phosphorus, Administration of.—Mr. A. W. Gerrard suggests the use of black resin as a solvent of phosphorus, of which it takes up at least 4 per cent. Omitting the details of preparation, the following is the formula he proposes: Take of phosphoretted resin (4%) 25 grs., powdered white sugar 75 grs., tincture of tolu a sufficient quantity. Make into 20 pills, each pill will contain one-twentieth of a grain of phosphorus. The advatages claimed for this formula are that it keeps well, is ready and convenient for the dispenser, and is inoffensive to the patient.—*Pharm. Journal.*

Dr. Ashburton Thompson finds the following formula to answer all requirements: Take of (*a.*) Phosphorus, 1 gr.; (*b.*) Absolute alcohol, ℥v.; (*c.*) Glycerin, ℥iss.; (*d.*) Rectified spirit, ℥ij.; (*e.*) Spirit of peppermint, ℥ij. (?). Dissolve (*a*) in (*b*) by a gentle heat; warm (*c*) and (*d*) together, mix with the preceding, and add (*e*) on cooling.

℥i = 1-12th gr. phosphorus. This forms a bright and clear mixture, almost destitute of the taste of odor of phosphorus, and stable even under exposure to light.—*London Pract.*

Oxygen and Ozone; their Therapeutic Uses.—Dr. Técère publishes a digest in French of the conclusions which Dr. Lender, of Berlin, has been led to by his continued researches. After pointing out the connection between the amount of atmospheric ozone and the greater or less prevalence of epidemic diseases, it is stated that it is to the presence of ozone that we are to refer the failure of certain vaccinations on a large scale, and of some otherwise inexplicable explosions, *e. g.*, of gun-cotton and picrate of potassium. In Dr. Lender's experience the artificial introduction of oxygen and ozone into the economy repairs the strength, slows the circulation, regulates and stimulates the appetite and digestion, brings on sleep, and, in fact, acts as a general tonic. 1,000 cc. of the ozonized water contain 4.45 of ozone at 0° C. and 760 mm. One to three wine-glassfuls may be taken three times a day on an average.—*Exchange.*

Chloral (*a*) *Preparation.*—In the "Journ. de Ph. et de Chim.," October 1873, M. Detsényi gives a good account of the manufacture of chloral as carried on at present in Berlin. In the vessel which receives the condensed hydrochloric acid disengaged in the process, M. Krämer has determined in the lower stratum an ethereal layer, composed of a mixture of chloride of ethylene and chloride of ethylidene. This latter compound has been examined by O. Liebreich, and found to possess anæsthetic properties. The exact separation of these two ethereal bodies is difficult.

(*b.*) *Quantitative Estimation.*—In the "Report" for August, 1871, a sketch was given of three methods for the quantitative estimation of chloral hydrate—viz., the "ammonia process" of Williams and Umney, the "sulphuric acid test" of Versmann, and the "lime process" of Wood. MM. Meyer and Haffter propose a volumetric method of simple application. From the fundamental equation, $C_2 HCl_3 O, H_2 O + Na HO = CHCl_3 + Na CHO_2 + H_2 O$, we see that one molecule of hydrate of chloral (*i. e.*, 165.5 grs.) saturates exactly one molecule of soda. If, then, we introduce a given weight of chloral to be tested in a

known excess of solution of soda, and afterwards determine the excess of soda by means of standard acid, the difference will be the amount of soda neutralized by the chloral, from which we can calculate the chloral. If the chloral should contain, as impurity, any free hydrochloric acid, this must previously be removed by agitation with carbonate of calcium.—*Repert. de Pharm.*, No. 16, 1873.

(*c.*) *Coloration with Oil of Peppermint.*—M. Carl Jehn points out that if chloral hydrate be touched with a drop of oil of peppermint, there is soon manifested a red tinge, which gradually deepens. The color is not discharged by heat, and its intensity is augmented by the addition of a drop of sulphuric acid. A number of other essential oils thus tested gave no reaction.—*Rep. de Pharm.*, No. 18, 1873.

(*d.*) *Therapeutics of.*—In the July, August, and September numbers of the "Journ. de Pharm. et de Chim., Professor de Gubler discusses, in a very interesting, and, as is his wont, a careful manner, the true position of chloral in therapeutics. At the outset he declares his dissent from the chloroform theory of Liebreich, and adduces overwhelming arguments against the supposed transformation of chloral into chloroform within the organism. So far back as 1870, *i. e.*, a year after its introduction, he publicly taught the doctrine of the *autonomy of chloral*, and it almost seems as if the simplicity of Liebreich's theory blinded the eyes of its supporters to patent, but contradictory facts. Not to speak of the obstacle which the albumen of the serum puts in the way of the realization of chemical phenomena indicated by theory, we know that a *strong* solution of alkali is requisite for the conversion of chloral into chloroform. Yet the blood is only a feebly alkaline fluid; moreover, in the blood of chloralized animals but a very minute quantity of chloroform has ever been detected—out of all proportion to the dose of chloral administered. M. Gubler himself has never succeeded in developing chloroform by putting chloral in contact with blood, saliva, or Vichy water, and he seems to be unacquainted with the decisive experiments of Dr. A. Gamgee

on this point, which we quoted in the "Report" August, 1870. If any of the chloral introduced into the system be changed into chloroform, it must be a very small portion indeed. Again, clinical and physiological observation exhibits fundamental differences between the action of chloral and chloroform, and, among others, the suddenness of the hypnotic influence of chloral is one of the best arguments in support of its autonomy. The hypothesis of the peculiar effects of chloral being due to the evolution of *nascent* chloroform, is both gratuitous and unnecessary.

To sum up, while chloroform is the most powerful of anæsthetics, and a hypnotic of little value, chloral, on the contrary, enjoys a hypnotic power comparable to that of opium, and only causes loss of sensibility at the moment that it threatens life, chiefly by a paralyzing influence on the heart. According to Labbé and Gubler, this paralyzing action is mainly, if not exclusively transmitted through the medulla oblongata. M. Gubler points out that most of the fatal accidents which have occurred under the use of chloral were in association with lesions of the heart, and he thinks that prudence should be exercised in administering chloral to patients affected with disturbances of cardiac innervation, characterized by feebleness of contraction, and palpitation or intermittency. In previous "Reports" numerous illustrations were furnished of the capabilities of chloral for doing harm as well as good, and a not inconsiderable number of deaths must undoubtedly be attributed to it. The accidents to which chloral has given rise may collectively be termed *chloralism*, and we should distinguish an acute and a chronic chloralism. The former may be slight or grave, and even fatal.

(*a.*) In the slight form of the phenomena observed are—vomiting, especially if the patient be standing, vertigo, dullness, and loss of strength. Consecutively, various eruptions have been noticed—erythema, scarlatiniform rash, urticaria, evidences of paralysis of the sympathetic with purpura, coincident inflammations of mucous membranes, etc.

(*b.*) In the grave form, the symptoms evinced are—paleness, disturbance of vision, cold sweats, feebleness and depression of pulse, stupor, coma, mydriasis, tonic tetanoid convulsions, and death.

In *chronic chloralism*, phenomena, reminding us of ergotism, have been met with—viz., hyperæsthesia, general malaise, desquamation of the cuticle of the fingers, with superficial ulceration around the nails, anasarca, albuminuria, enfeeblement of the heart, and oppression of respiration.

The contra-indications to chloral pointed out by Liebreich himself were enumerated in the "Report," August, 1872. In the "Rev. de Ther. Med. Chir.," Julliet 15, 1873, Drs. Pelman and von Gellhorn indicate as mischievous effects from chloral—extreme narcosis, delirium, trembling, congestion of the face, complete dysuria, with spasm of the vesical sphincter, pains in the limbs, general lassitude, vaso-motor and circulatory troubles, œdema of the lungs, diarrhœa, emaciation, and a marked tendency to perenchymatous hæmorrhages. Dr. W. Kirkpatrick Murphy also calls attention to the evils resulting from the widespread popular consumption of chloral, and he gives three interesting cases, out of many, illustrating the severe nervous symptoms which followed the too prolonged and injudicious use of chloral ("Lancet," August 2d and 9th, 1873). In the "Practitioner" for June, 1873, is an abstract of an important paper, by Dr. Kirn, on chronic chloral poisoning, which, however, is too long to reproduce in this "Report." Therapeutically considered, M. Gubler offers some remarks on chloral as a local alterative and stimulant, as an anæsthetic, as an antispasmodic, a hypnotic, and as a remedy in hydrophobia, epilepsy, puerperal convulsions, and tetanus. The local applications of chloral are few, and practically unimportant, and its use as a surgical anæsthetic is forbidden, because it induces loss of sensibility only at the risk of loss of life.—*Dublin Jour. Med. Science.*

Croton-chloral.—$C_4 H_3 Cl_3 O, H_2 O$. Among his "Contribu-

tions from the Pharmacological Institute of the University of Vienna," Dr. Carl v. Schroff, Jun., publishes some experiments made on frogs with croton-chloral alone, and in combination with strychnia. He first gives the details of the symptoms, resulting in death, which followed the subcutaneous injection of 0.0225 grms. of croton-chloral into a frog weighing 42.4 grms. Within fifty minutes there was total extinction of reflex excitability to any mechanical stimulation. He then gives two experiments on the combined action of croton-chloral and strychnia. In the one, 1 mgm. of strychnia was injected into a frog weighing 35.5 grm., four minutes after a dose of 0.015 grm. croton-chloral. Death ensued more rapidly than in the previous control-experiment. In seven minutes after the administration of the strychnia intense tetanus was developed, and after three hours reflex excitability was completely lost, the tetanic state having gradually diminished. After five hours the thorax was opened, and the ventricle was found to contract imperfectly.

In the other, 0.6 mgm. strychnia was administered to a frog weighing 37.5 grm., four minutes after the same dose of croton-chloral—i. e., 0.015 grm. In seven minutes intense and protracted tetanus set in. After fifty-seven minutes reflex excitability was nearly extinct, but after six hours it returned; during the next two days it was exalted, the slightest touch calling forth energetic contractions, and early on the fourth day the animal was found dead.—*Stricker's Mediz., Jahrb.*. 1872, IV. Heft.

In the "British Medical Journal," December 20, 1873, is a short paper by Dr. O. Liebreich on the action and uses of croton-chloral hydrate, which contains some interesting speculations, based on his theory of the decomposition of chloral within the body. The distinguished Professor says:

"Croton-chloral differs in its outward appearance from hydrate of chloral, by its being dissolved with difficulty in water, and by its crystallizing in small glittering tablets. Its action, though similar to that of hydrate of chloral, differs widely

from the latter with regard to its physiological effects. Four grammes, or a drachm, of this substance, dissolved in water, and introduced into the stomach, produce in the course of from fifteen to twenty minutes a deep sleep, accompanied by anæsthesia of the head. While the eyeball has lost its irritability, and the nervus trigeminus shows no reäction whatever on being irritated, the tone of the muscles remains unaltered.

"I have experimented with this remedy on maniacs during an attack of mania. They remained quietly sitting on their chairs in a deep sleep, their pulse and respiration being unchanged for two whole hours together. If anæsthesia had reached so high a degree in consequence of the application of hydrate of chloral, the patients would have dropped from their chairs, and both their pulse and respiration would have been considerably retarded. I have seen croton-chloral acting in the same way on healthy individuals. In some cases of tic douloureux, the remarkable phenomenon is exhibited that pain ceases before sleep sets in. I am sorry to say, however, that this remedy acts only as a palliative in this dreadful disease. I nevertheless prefer its action to that of morphia, because it has effects as good as the latter remedy, without being so detrimental to the constitution in general. I have never observed any unfavorable effects of croton-chloral on the stomach or any other organ, although I have made frequent experiments with it.

"The indications for the use of this remedy are to be found: 1. In cases where hydrate of chloral is inapplicable, on account of heart-disease; 2. In cases of neuralgia in the district of the nervus trigeminus; 3. In cases where very large doses of chloral are necessary to produce sleep. I there recommend the addition of croton-chloral to hydrate of chloral.

"Whilst examining the difference between the action of hydrate of chloral and that of croton-chloral, I have discovered the remarkable fact that it is not the first, but the second, product of decomposition of the latter substance which is brought into action, on account of the first being too rapidly destroyed.

Croton-chloral, when subjected to the influence of an alkali, first forms allyl-chloroform, a trichlorated body, which is rapidly decomposed into a bichlorated substance called bichloralleyne. Now, both chloroform and trichlorated substances act, as I have shown, in the first stage on the brain, in the second on the spinal cord, and in the third on the heart. The retardation of respiration is to be explained by the agency of these substances on the last-mentioned organ. Bichlorated substances act differently, as is proved by bichloride of methylene. Even if the circulation of the blood in an animal have been stopped by this latter agent for one minute, life may be restored by artificial respiration, which is impossible whenever trichlorated substances have produced this effect, in which case the muscles of the heart remain paralyzed. Well, in animals poisoned by croton-chloral to such a degree that both circulation and respiration are stopped entirely, artificial respiration is able to restore the action of the heart immediately, and the life of the animal may thus be saved. Bichlorallylene, inhaled by the lungs, produce the same effects on animals as croton-chloral. We thus see these bichlorated substances acting on the brain, spinal cord, and medulla oblongata, but not on the heart, which explains the fact that both respiration and circulation remain unaltered in man by a medicinal dose. It is a highly interesting fact, however, that under favorable conditions we still are able to produce in animals the effects of the first product of decomposition of croton-chloral—i. e., of the trichlorated substance or of allyl-chloroform. In order to observe these effects it is necessary to introduce immense doses of croton-chloral into the body, when paralysis of the heart actually does come."

Dr. Wickham Legg's favorable experience of croton-chloral in the treatment of paroxysmal pain of the fifth nerve was noticed in the last "Report," August, 1873, and more recently Dr. Benson Baker speaks of it as being of the greatest service in cases of nerve pain, given in doses of 1 or 2 grs. every hour or two. In thirteen patients not a single bad symptom was observed. It relieved pain quickly, caused natural sleep, and

in several cases acted as a gentle laxative, and evoked no subsequent headache or digestive disturbance.—*British Medical Journal*

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

"Judex damnatur cum nocens absolvitur."

A System of Midwifery, Including the Diseases of Pregnancy and the Puerperal State. By Wm. Leishman, M. D.. Regius Professor of Midwifery in the University of Glasgow, Scotland, etc., etc. With One Hundred and Eighty-two Illustrations. Philadelphia: H. C. Lea. 1873.

The author furnishes this work as a complete system of midwifery, intended for both practitioners and students. Such an avowal, while it invites and justifies systematic criticism, demonstrates that the author believes his work to be not only comprehensive, but complete. Whether it be so or not, one with such great experience, high position, and ample opportunities could scarcely fail to present a work most valuable. On examination, the volume will be found to more than justify anticipation. In regard to the mechanism and management of labor, the work is highly commendable. The author seems to be fully abreast of the current of medical science, both in its physiological and pathological manifestations. The chapters on conception, development, pregnancy, lactation, puerperal eclampsia, are worthy of the closest study.

The author's views in regard to treatment are often open to sharp criticism, and it is evident that he yet leans somewhat to the exploded views, once forming the pride and main reliance of those old anti-phlogistic practitioners, whose boasts of successes and whose percentages of fatality were so generally and so amusingly in a direct ratio with each other. Sir Thomas Watson finds in Dr. Leishman, a very warm admirer of his so-termed "change of type" theory; and now, long after the dis-

tinguished English Baronet has frankly, manfully, but most painfully abandoned his demonstrable heresy, it is strange indeed to find this Scotch admirer yet reflecting views which their chief originator has thus publicly repudiated.

The author in treating of puerperal peritonitis, or metro-peritonitis, etc., etc., seems to draw no distinction between the inflammation due to ordinary causes, and that graver form of inflammation due to septic absorption; or if he does (as he must) recognize this distinction, he does not apparently admit the truth now so generally accepted, that while puerperal peritonitis of traumatic and perhaps of epidemic character may be treated advantageously at times by arterial sedatives, rest, low diet, etc., etc., peritonitis of septic origin would almost inevitably be rendered fatal by the adoption of such practice; the only treatment for this condition being the free use of alcohol, quinine, camphor, nutritious diet, with other combinations of anti-septics, stimulants, and roborants. With the distinguished American, Fordyce Barker, M. D., he seems to assume, that puerperal peritonitis may not only exceptionally but often be due to causes other than those septic in character; that puerperal peritonitis is not almost always a true septicæmic condition, but that it often prevails as the result of agencies non-septic in character. With this view, it is not strange that Dr. Leishman is found prescribing free bleeding and an anti-phlogistic treatment in some of his cases of puerperal peritonitis.

In examining, even cursorily, the recent works of Schroder, Leishman, Barker, and others, one can not fail to be surprised at and to regret the antagonisms, discrepancies, and inconsistences so often manifested in regard to the fever of the puerperal condition. While all well-informed practitioners can not refuse to admit that puerperal fever is occasionally due to other cause than that of actual septic absorption, there must be few indeed who, guided by prudence or experience, will admit that such cases are seen more than exceptionally in practice. Such cases are only seen rarely; and it is more safe and prudent to ascribe puerperal peritonitis to septic cause; for, in proportion

as one departs from such a rule, is the danger to the patient increased by mal-practice, and the danger to other patients increased by the communication of a poison which not appreciated at the time is already disseminated when discovered. It is practically dangerous for the medical mind to be indoctrinated with the idea, that puerperal peritonitis is due, save with very rare exceptions, to other than a true septic cause. This work is beautifully illustrated, and it is issued in the publisher's very best style. The Profession are assured that there is no work connected with this department of medicine which they will read with more interest, pleasure and profit.

AN INTRODUCTION TO PHYSICAL MEASUREMENTS. By Dr. F. KOHLRAUSCH. New York: D. Appleton & Co. 1874.

This work is of interest rather to the pure mathematical scientist than to the man of science. Here is an extract taken casually from one of its pages: "Strictly speaking, when the linear dimensions are varied in the ratio of $1 + at$, the volume changes in the ratio of $1 + at = 1 + 3$ at 3 a, etc." Again, here is another extract: "$A = + 0.1 - 0.8 + 0.4 + 0.3 + 0.0 - 0.2 - 0.7 = - 0.18$." It is believed that this work will become quite a favorite with "the busy practitioner;" and that in his moments of exhaustion he will recuperate his energies, by pleasingly indulging in these light and entertaining recreations. The edition printed is quite limited, and physicians are warned, that unless their orders are promptly sent in they will lose the great pleasure arising from a systematic study of these delightful, entertaining and most seductive problems.

GUN-SHOT WOUNDS OF THE ABDOMEN AND THEIR TREATMENT. By EUGENE PEUGNET, M. D. New York: William Wood & Co. 1874.

This monograph has been published with the view of changing the manner of conducting criminal investigations. It presents the medical history of the case of James Fisk, and is for this reason, if for no other, an interesting volume; but in other

respects it will be found instructive and useful. The author has subdivided his subject as follows: History of the case of James Fisk; Description of Shock; Penetrating Gun-shot Wounds of the Abdomen; the Physiological and Toxical Effects of Morphine; the Medical Jurisprudence of the Stokes Case. The work will be read with great interest and much profit. To the student of medical jurisprudence, of surgery and of toxicology, it will be specially interesting. There can be no doubt but that James Fisk died, not from the immediate effects of his wounds (shock); not from injudicious probing; but from the reckless use of morphine. He died from morphine poisoning. The impression very generally induced by the secular Press, that Fisk died from the effects of the injudicious probing of his wounds is much to be deplored; for it has unquestionably materially tended to induce an abandonment of one of the most harmless and necessary operations in traumatic surgery. The probe, in competent hands, furnishes aid and knowledge otherwise almost wholly unattainable. The volume is neatly and carefully issued.

ANNUAL REPORT OF THE SUPERVISING SURGEON OF THE MARINE HOSPITAL SERVICE OF THE UNITED STATES. 1873. By JOHN M. WOODWORTH, M. D., Washington, D. C.

This report is even superior to the last in point of scientific excellence and general information, though it may be inferior to it in matters of Bureau routine and statistical detail. The classified list of marine hospitals is complete. The hospital at Louisville, under the charge of its energetic and efficient Surgeon T. J. Griffiths, M. D., is in excellent condition. One of the best features of the work is that entitled the Natural History of Yellow Fever in the United States, by J. M. Toner, Washington, D. C. This contribution of Dr. Toner is very able, exhaustive, elaborate and valuable. The article on Hospitals and Hospital Construction, by the author, is carefully and admirably prepared. Dr. Woodworth's Reports are positive acquisitions not only to his Bureau, but also to medical science.

DICTIONARY OF ELEVATIONS AND CLIMATIC REGISTER. By J. M. TONER, M. D., Washington, D. C.

The various treatises of Dr. J. M. Toner upon matters of Social Science, have attracted attention and have resulted in several instances in setting on foot very valuable reforms. "One of the plans of an important sanitary and humanitarian nature broached by him has been that of establishing sanitaria on elevated grounds, for the use of sick children in the hot season, a time of the year when the little ones are swept off by thousands by cholera infantum and like diseases in our crowded cities of low elevation." He urges with force that our entire thought should not be expended upon the mere wrecks of humanity cared for in our hospitals, but should be directed also to the myriads of young lives now sacrificed annually to disease, but who might be saved to fill careers of usefulness in the world.

The latest work by Dr. Toner, and somewhat in the same connection, is this "Dictionary of Elevations and Climatic Register of the United States," containing, in addition to elevations, the latitude, mean annual temperature, and the total annual rain-fall of the cities, towns, and localities in the United States, concerning which the requisite data have been obtainable. The orographic and other physical peculiarities of North America, and more briefly of the world, have also been noted with the care and industry for which the author is distinguished, and altogether the work supplies an amount and kind of information that makes it unique in the field occupied. The work, he says, has been undertaken chiefly for the purpose of placing within reach of the medical profession a record that may enable and induce professional men in different localities to observe, record, and contrast the influence of elevation, if it has any, on health and disease. Hitherto latitude and longitude have been the chief and almost the only conditions modifying climate that have been taken into account, in considering the influence of localities on health; but the observations of physicians and travelers present facts suggesting that altitude to

some extent controls the type of disease. Of course it is necessary for the observer to keep in view the influences not only of latitude and longitude, but also of a dry or a humid atmosphere, and of a high or low barometer. This Dictionary points out convenient modes of taking observations by those feeling an interest in the subject. Heights of localities may be determined approximately with the aid of a barometer, as the mercury falls in it about one inch for every nine hundred and forty feet above the level of the sea; or by boiling water, which at sea level boils at 212°, but owing to the lessened weight of atmosphere in ascending, boils at the rate of one degree less for every four hundred and fifty feet of perpendicular ascent. The thermometer, too, registers in almost any locality one degree lower temperature for about 300 feet of perpendicular height above the level of the sea. These conditions or laws of the ocean of atmosphere in which we live, and which has a depth estimated at forty-five miles, and weight of fifteen pounds to the square inch, are nearly constant, and with the well-known purity of the free circulating air and the great abundance of electricity and ozone, which constantly pervade elevated localities, are elements too potent not to exercise an important influence on man's well being. All the data obtainable, point to the fact that a residence in a moderately elevated region, either in a tropical or temperate zone, anywhere between a few hundred feet above the level of the sea, and a line that marks Alpine vegetation, in healthier than the tide-water lands. It is in this intermediate strata of climate and barometric influence that the human race attains its noblest physical development. The most productive States of our Union, with the largest population and with the greatest aggregate wealth, are to be found among those having an average elevation above the sea of from 400 to 1,000 feet. The pursuits of commerce have, however, caused most of our large cities to be placed on low ground, near navigable waters. The table of 311 towns in this Dictionary shows that the majority of the denizens of our large American cities are living at an elevation of but a few hundred

feet above tide-water; and that there are eighty cities situated at an elevation of less than one hundred feet above sea level, with a combined population of 4,868,107. It does not appear that the site of a single city in the United States has been selected because of the special salubrity of the locality. In a hygienic sense it is to be regretted that the larger commercial cities do not occupy more elevated sites. There is a noticeable peculiarity in the location of our American cities, at or near the mouth of rivers emptying into the Atlantic ocean, in the fact that they are all situated on the left bank; and, further, there is scarcely an exception to the fact that, to the south of all these cities, there are large marshy flats, over which the prevailing winds blow, and carry miasm directly across the cities.

Dr. Toner seems modestly disposed to present his data for investigation by others, rather than to give his own conclusions in regard to the effect of elevation upon different diseases, but he notes in brief terms the fact that yellow fever has perhaps never reached a higher elevation in the United States than four hundred and sixty feet, and rarely above Vicksburg (175) and Memphis (262). The same is the fact in Mexico and the West Indies. As regards pulmonary disease, there appears to be a growing distrust in the curative influence of the sea-shore and the low and damp coast of the tropical islands, so extensively patronized in the past. A table presented in the Dictionary which gives the percentage of deaths to the whole population for the last three decades, and the relative frequency of consumption to total deaths in each of the States and Territories of the United States, as returned in the census of 1860 and 1870, shows that those States, as a general rule, presenting the lowest elevations and greatest area of ponds, lakes, rivers, and wet lands to their whole area have the largest number of deaths from deaths affecting the various organs. The apprehension that high elevations, because of the lessened barometric pressure, may induce hæmorrhages where the lungs are weakened by disease has not proved to be well founded. From the testi-

mony of disinterested army officers and other parties, given not to support any theory, but recorded as interesting facts observed, Dr. Toner is lead to surmise that there may be found a region in some part of New Mexico, perhaps as favorable for patients suffering from phthisis, as can be found within the boundaries of the United States.

This is a most remarkable and unique work, and evinces an amount of patient and accurate labor almost unsurpassed. As a statistician and scientist, the author ranks deservedly very high, and his many friends take great pleasure in his distinctions and triumphs. Acknowledgment is made to the "Washington Star" for very much of this review of a work which all physicians should obtain.

MISCELLANEOUS.

"Non omnes eadem mirantur amant que."

Homœopathic Pilules.—In the April and July numbers of the "Practitioner" is recorded a series of chemical examinations of "pilules" of the second dilution, purporting to contain various active drugs. The average weight of the "pilule" was 0.6 gr., and each should accordingly contain 0.00006 grs. of the drug.

Sulphate of Copper Pilules.—Two samples, of 100 and 200 pilules respectively, were examined, but no copper whatever was detected in them, although if even so little as .0001 gr. of the sulphate had been present it would have been found.

Corrosive Sublimate Pilules.—It was just possible to detect mercury in 200 of the pilules. There was not one-twentieth of the amount which should have been present.

Nux Vomica Pilules.—No strychnia could be detected, even when 300 pilules were employed, which should have contained about one ten-thousandth of a grain of strychnine. Now, so

small a quantity as one seven-thousandth of a grain of this alkaloid can be distinctly recognized by chemical tests.

Aconitum Napellus Pilules.—No aconitia could be detected in two samples of 100 pilules each.

Belladonna Pilules.—No atropia could be detected in two samples of 100 pilules each. Comparative experiments showed that by means of chemical tests alone so little as one six-thousandth of a grain of atropia would have been detected with certainty.—*Pharm Journ.*, July, 19, 1873.

Carbolic Acid and Zymotic Disease.—Dr. J. Dougall has made some simple experiments on the effects of a concentrated atmosphere of carbolic acid and other volatile media on vaccine lymph, which possess considerable interest. After exposure of the lymph to the chemical agent, vaccination was performed with the dried lymph, mixed with glycerin, and with the following results:

I.—*Successful.*

Reagent	Reaction of lymph and glycerin.
Carbolic acid	Neutral.
Chloroform	Alkaline.
Camphor	do
Ether	do
Iodine	Neutral.

II.—*Unsuccessful.*

Chloride of lime	Acid.
Sulphurous acid	do
Nitrous acid	do
Glacial acetic acid	do
Hydrochloric acid	do

From this it appears that strong acids, or a body causing acidity by chemical affinity, *e. g.*, chlorine, are destructive of the active properties of vaccine lymph, and, therefore, à priori of variolous matter and other zymotic poisons. The carbolized lymph was repeatedly "vaccinated in and in," with unvarying

success. These simple facts show that the present extensive use of carbolic acid as an anti-zymotic is a serious delusion.

Carbolic acid is relatively a fair antiseptic, but it by no means follows that it is a pro tanto anti-zymotic.—*Lancet.*

Law and Medicine.—Smart young limbs of the law take great delight in puzzling a medical witness when he gets on the stand. One such was cross-examining the celebrated French chemist Orfila, and put to him the question whether he could state the precise amount of arsenic requisite to kill a fly. "Certainly," replied the expert; "but I must know beforehand the age of the fly, its sex, its temperament, its condition, and habits of body, whether married or single, widow or maiden, widower or bachelor."—*Med. and Surg. Reporter.*

MEDICAL NEWS.

'Nulla dies sine linea."

The publication of "Rankin's Abstract" has been discontinued.———The "Archives of Electrology and Neurology" is the title of a new journal soon to be issued by Dr. George M. Beard, of New York.———The American Medical Association will meet June 2d, 1874, at Detroit, Michigan.———During the month of March there was a large and pleasant reünion of the Alumni of the University of Pennsylvania. Dr. Claudius H. Mastin, of Mobile, delivered the alumni address. This address was very highly commended by the Philadelphia papers, and was unquestionably an eloquent and able production. ———The Bennett Medical Eclectic College of Chicago is actually claiming to be under the prestige and to be a protegé of Dr. J. Hughes Bennett, of Edinburgh. This distinguished gentleman being claimed as a Great Eclectic!!———The Medical Association of the State of Alabama met on the 13th of April

at Selma; Dr. George A. Ketchum, of Mobile, President, and Dr. B. H. Riggs, of Selma, Secretary. The Association is said to have had a most harmonious and profitable meeting. Dr. J. S. Weatherly, of Montgomery, was elected President; Dr. J. J. Dement, of Huntsville, first Vice-President; Dr. R. J. Webb, of Sumter, second Vice-President; Dr. B. H. Riggs, of Selma, Secretary; Dr. W. C. Jackson, of Montgomery, Treasurer; Dr. J. O. Summers, of Greensboro, Orator. The Association meets next April at Montgomery.———A Kansas physician says that in the treatment of trachoma, "sulphate of zinc calls for praise in tones of peeling thunder." Wood & Bache will no doubt embalm this unique fact in the next edition of the Dispensatory.———A monument has just been erected in that celebrated cemetery, Pére la Chaise, in memory of Marshal de Clair, the recent editor of "Union Medicale." That excellent journal had its pecuniary trials, as all journals, secular or professional, must have; it is somewhat amusing, however, to see what a scriptural response its patrons made to the editor's repeated request for prompt support; "he asked for bread and they gave him a stone." In some countries they, at times, stone an editor during life, but the French do better, they stone him after death.———Dr. Robert Patterson, of Leith, has just published a memoir of Sir James Syme; it is much commended.———The directors of that great hospital, the Berlin Charité, have just given Prof. Traube a public dinner, on the completion of his twenty-fifth year of hospital service.———The venerable Dr. Henry Howard, former Professor of Medicine and Obstetrics in the University of Virginia, died March 2, 1874. Dr. Howard was connected with this University for twenty-eight years; resigning this position about seven years since. A multitude of distinguished practitioners in this country will hear of his death with sincere sorrow.——— Bellevue Hospital is said to be unfit for hospital purposes; forty-eight of 100 cases of amputation die. The administration is said to be very bad. Prompt and radical action seems demanded.———At the New York Free Medical Col-

lege, fourteen young females were recently made doctors; at the Woman's Medical College, New York, five received their degrees; *terra movit.*———The Obstetrical Society of London has refused to admit Miss Anderson, a regular graduate and obstetrician. This distinguished Society has disgusted, by this act, at least one-tenth of one per cent. of sensible physicians. It should be termed the Gynæphagological League.———Illinois refuses to license houses of ill-fame.———Esmarched arms and legs are becoming as numerous as American surgeons. Every one owning a catling is disconsolate, until he has Esmarched his man; and to save the blood now seems to be of more importance than to save the limb.———Forbes Winslow, M. D., the great psychologist and distinguished author, died March 3d, in the sixty-fourth year of his age.——— The first number of the "Virginia Medical Monthly" has made its appearance. It is issued in a most creditable manner, and the editor has evinced the best judgment and taste in its preparation. The work is in every respect worthy of support. Its editor, Dr. L. B. Edwards, has the best wishes of the editor of this Journal for the success of this new monthly.———A small lake in Churchill county, Nevada, covering an area of seven acres, is a perfect well of carbonate of soda, nearly pure. Twenty thousand tons a year can be obtained from it.———The Philadelphia College of Physicians has recently passed excellent memorial resolutions in regard to the death of Dr. Henry Miller, of Louisville, Ky.———Dr. William H. Pancoast succeeds his father in the Chair of Anatomy at the Jefferson Medical College, Philadelphia. There were five candidates.——— Mr. Joseph Remington succeeds to the Chair of Practice and Theory of Pharmacy, recently occupied by the lamented William Proctor, Jr.———An International Pharmaceutical Congress will be held at St. Petersburg in August, 1874.———At the University of Berne, there are, at present, twenty-five lady medical students, among whom are twenty-two of the Russian women, whom the last ukase forced to leave Zurich.—*Lancet.* ———A Livingstone Scholarship is to be instituted at Charing-

cross Hospital as a memorial of the great traveler who acquired a part of his medical education there.—*Lancet.*———*Cremation of the Dead.*—The Communal Council of Vienna has adopted, by a large majority, the proposal of one of its members to establish in the cemetery the necessary apparatus for cremation, the use of which will be optional and open to all. A similar proposition is now being agitated at Gratz, which contains a population of 100,000.———*New Sanitarium.*—Certain advocates of the *blood cure* have decided to erect a large building in Brighton in the vicinity of the slaughter houses, to which invalids may resort for this special treatment. *Gore Hall* is suggested as the most appropriate name for this new institution.———*Emetics by Subcutaneous Injection.*—The only therapeutic agents as yet known which are capable of being used as emetics by subcutaneous injection are *emetin* and *apomorphia.* The dose of the former is one-thirtieth of a grain, given in acidulated water. Apomorphia, which is morphia less an atom of water, is a speedy, safe and pleasant emetic, never acting as a local irritant. The dose (hypodermically) is from .046 to .169 of a grain.———*Discouraging Emotional Insanity.*—A bill to discourage emotional insanity with a homicidal tendency has been introduced into the Ohio Legislature. It provides that, where insanity is set up as the defense in cases of killing, the prisoner shall undergo a preliminary trial to decide upon the justice of his plea, and the exact measure of his accountability. If he be adjudged sane, trial will, of course, proceed in the ordinary form; but if he be found insane he is at once committed to a lunatic asylum. Pending his incarceration therein, the indictment still hangs over him, and if he recovers his senses he will undergo trial.—*Medical and Surgical Reporter.*———The great Cruveilher died in March, in his eighty-ninth year.———Dr. Burrows, President of the Royal College of Physicians and Surgeons, has just been Baroneted by the Queen.———The Harvard Medical College is a success.

EDITORIAL.

"Nullius addictus jurare in verba magistri."—Hor.

AMERICAN MEDICAL ASSOCIATION.—The meeting of this Body at Detroit, in June next, will be most important in its results. If the Association decides to commit the legislation of all matters personal, ethical and routine in character to a Medical Senate, consisting of two members from each State (these two members being sent by State Societies, or elected on nomination by the Nominating Committee of the Association), the future history of the Body will be assured, triumphant, and progressive. It has also now to decide whether membership can only be accorded to those sent by organized Medical Societies. Such membership is responsible and valuable. At present who is there that can not be a member? Again, the proceedings should consist almost solely of the reading or discussing of scientific papers, and of the debates based upon such action. The whole of such proceedings being determined or arranged by the Sections or some duly authorized Body enabled to protect the chief Body from annoyance. All papers should be sent to a committee, instructed absolutely to publish only such papers as embody the results of original research, or such as are ordered by the Association to be published. Routine papers, reports, compilations, topographical and necrological contributions should (if worthy) be simply received, approved and recommended for publication to the Medical Press. The phonographic reports or Section-work will be valuable. Such management will make this Association a really scientific and powerful Representative Body; at present and in the past, it has been most unsatisfactory and inefficient. Prompt and thorough legislation is necessary to win back those who have abandoned the Association, and to prevent the hopeful still remaining from repudiating the whole organization as practically worthless, and a source of difficulty, disappointment and confusion. Physicians should be made to see and feel that by attending the meetings of the Association they will be scientifically refreshed, improved

and instructed. Effect this and triumph is absolute and enduring. To meet friends; to make friends; to recuperate and rest; to enjoy social reünion, etc., "is all very well," but the representative medical men who are to give to the chief Scientific Body of this country prestige, importance and genuine reputation, will not, as a rule, leave home for such purposes. Reform and triumph, or drift and die. This is now the issue.

THE SIAMESE TWINS.—It will be seen, by examining the original correspondence department of this Journal, that Dr. R. A. Kinloch, Dean of the Charleston (S. C.) Medical College, and Dr. Jerome Cochrane, Dean of the Mobile (Ala.) Medical College, sent, for distribution, bundles of their circulars (false and personal) to the Mississippi State Medical Association at its recent meeting; that a letter was received and read, calling attention to these circulars and suggesting a vote of censure upon the editor of this Journal for his exposure of the educational sham which Drs. Kinloch and Cochrane have, under the guise of free teaching, attempted to foist upon the Medical Profession and medical students of this country. It will be seen also that their effort was treated with just contempt, and that the only return received was the general and severe indignation of the medical gentlemen composing the Association mentioned.

Drs. Kinloch and Cochrane not being able to sustain themselves independently of each other, have thus formed a coalition or co-partnership as close and indissoluble as the band which united the celebrated twins of Siam. They will always hereafter be remembered as the Siamese Twins, in collegiate shams and unworthy appeals for corporate protection. While they are thus declared, it is a matter of extreme difficulty to determine the name which shall respectively be assigned to each. One is not willing to give space sufficient for the names Cochrane and Kinloch, and yet it is exceedingly puzzling to determine how the names Chang and Eng shall be distributed. It will be remembered that one of the Siam unfortunates had

his liver on the wrong side, but in this case both livers are on the wrong side. Again, Eng is said to have had less brains than Chang. It is proper that one of the parties here described should be termed Eng, but it is impossible to determine who this shall be. Then Eng is said to have been morally stronger than Chang, making thus the difficulty of assigning to each his proper name greater than ever. Lastly, one of the Siamese Twins, it will be remembered, died first, but as both of their successors died in Mississippi at the same time, a correct christening seems almost impossible. There is but one solution to the difficulty. As Dr. Cochrane has not published much, and as it is impossible to believe that he could write anything as silly as the productions of his colleague, it is only fair to accord to him the name of Chang, while his unfortunate co-partner is left to sustain the cerebral role of Eng. To seek the distinction of a great name is an ambition worthy of the least as well as of the noblest of men. The last achieve this honor often; the former very seldom, but when they do triumph, it is a special duty to declare the fact. Grand and great names are not uncommon, but no one now living has won the high-sounding appellation properly belonging to each of these physicians. Think of the profound satisfaction which any one of their descendents will experience, when, triumphantly rubbing his hands, he exclaims to admiring friends, "My ancestor won the greatest of names, he was an OMPHELOPAGUS XIPHODIDYMUS!"

BREVITIES.

More than a hundred patients are drinking blood at the Brighton (Mass.) Abattoir for various diseases. A hotel for such patients is in anticipation.———New York has formed a Mutual Cremation Society.———The crusading mania which has recently attacked so many American women, as the result of which they have become, on many occasions, a disorderly, tyrannical and offensive mob, is on the decrease. Had men so behaved they would have been shot or incarcerated. The motive has been pure, but the action disgusting and reprehensible.

———"The Missouri Clinical Record" is the title of a new medical journal; $3 per annum, monthly, 16 quarto pages; W. A. Hardway, M. D., Missouri Medical College, St. Louis. The fact is published with pleasure; we "hang out the banner on the outer wall; the cry is still they come!"———Spencer Wells has just operated successfully for ovariotomy upon a girl eight years old, sent to him from San Francisco.———The Union Medicale says that the number of students in Paris is steadily on the decline; sic gloria, etc.———The common municipal order to muzzle dogs is both absurd and dangerous in the extreme. The skin of the dog has no perspiratory glands. The animal perspires (so to speak) through the tongue. Destroy evaporation there, and the much-dreaded hydrophobia is induced by the very law enacted to prevent it.———The second number of the "Chicago Journal of Nervous and Mental Disease" is able, handsome and instructive.———In the advertisements, there appears one from Schafer & Co., of Youngstown, Ohio. The editor has refunded all the money sent to him for the purchase of the picture described. The advertisers are unknown to the editor, and are not endorsed by him. While he is unwilling to say that they are unworthy of trust, he is not prepared to state that they can be trusted.———*Correction.*—In the article on Parturition, by Dr. Montrose Pallen, several errors, much regretted, have been made, and are promptly corrected. The article is in this number. On page 554, in 3d line in second pargraph, for "dropped" read dragged. On page 516, 7th line from the bottom, for "womb" read wound. On page 556, 9th line, first paragraph, for "Goutouly" read Coutouly. On page 556, 3d line, second paragraph, for "laceration" read excavation. On page 559, in 4th line from bottom, for "Smelle" read Smellie. On page 560, last line in second paragraph, for "aurable" read durable. On page 568, in 5th line, first paragraph, for "hid" read tied.

THE RICHMOND AND LOUISVILLE

MEDICAL JOURNAL.

VOL. XVII. JUNE, 1874. No. 6.

ORIGINAL COMMUNICATIONS.

"Qui docet discit."

ART. I.—CONTRIBUTIONS TO OPHTHALMIC SURGERY. By JOHN P. METTAUER, A. M., M. D., LL. D., Worsham, Prince Edward, Va.

The writer having enjoyed opportunities of treating cataract upon quite an extensive scale, presumes to offer this summary of his experience to his professional brethren, chiefly because the methods adopted by him differ from those *now* generally employed; and his experience dates back more than forty-years. He does not purpose the examination of any other modes of treatment but his own, only so far as may be necessary to indicate his reasons for his preferences.

Cataract was one of the earliest surgical diseases claiming the attention of the writer, and while a very young man, he was called on to operate in the case of a veteran officer, who held a commission in the army of the Father of his country. Extraction was the method he adopted, and the operation was executed in accordance with the precepts of Dr. Physick, and with the instruments he generally recommended. This operation

resulted unfortunately, and, chiefly, because the necessary after-treatment was imperfectly carried out by the nurses. Disastrous inflammation defeated the curative results, which a country surgeon could not so well guard his patient against, in the hands of ignorant and inexperienced nurses. The result of this operation satisfied the writer that extraction was not safe in a country practice, and he determined to operate in future by the couching or depressing method, should other opportunities offer. It was not very long before quite a favorable case for success presented itself, in which couching was employed, and resulted most propitiously, the patient, a young man about twenty-seven years old and healthy, receiving sight in both eyes instantly, with very slight traumatic inflammation following. Cases now multiplied rapidly, and in more than 800 successful examples the writer has only extracted in two instances. Couching, variously modified, was the method he adopted, and continues to employ long since the period of his adolescence, and with unabated interest, as well as with unfaltering visual power and facility of manipulatory execution.

The needle employed by the writer in the early periods of his ophthalmic surgery, was such as Dr. Physick advised, and he continued to use it for a number of years with very good success. This instrument he always considered to be needlessly large and long, in many instances the puncture formed by it bled so freely as to embarrass the operation, the blood escaping into the cavity of the eye, now and then. Besides, the wound being too large, the aqueous humor frequently escaped before the depression was perfected; it also seemed to cause undue inflammation. Finally a needle of very small, delicate size, and spear-pointed, was employed, with a short and conical shank. The shank being so formed as to fill the wound when carried to the proper depth, which prevents the escape of the aqueous humor, as well as the accidental slipping of the needle too far into the globe; and this is the form of straight needle he now uses. A curved needle of the same delicate form he also often employs, and, altogether, it is to be regarded as the best instrument. It

is less apt to do injury to the floor of the cavity of the globe than the straight needle, but in careful hands such injury would not be likely to follow the use of either of them. A needle was also used which was denominated the crank-shaped, of extreme delicacy, and designed chiefly for the anterior operation, or keratonysis, which will be referred to again, when the operation for which it is designed is described.

In fixing the eye for the operation, whenever intelligent assistants could be secured, the fingers were invariably employed; but not unfrequently it became necessary to use a speculum, especially with children; and the one figured in this paper was found, in all respects, quite efficient and convenient, as well as painless.

For a number of years the writer has preferred mid-summer and winter for his operations on the eyes, when delay was allowable, those seasons being less liable to catarrhal affections; and he has invariably delayed his operations until a more favorable state of the general health appeared, if patients chanced to be unwell from any cause at the time of application. A feverish state he has always regarded as unpropitious to success in the operations for cataract, and the operation should never be attempted then. It will be improper to operate when only one eye is affected, as the operation, if successful, would render vision comparatively useless, by reason of the altered state of the focal distance of the operated eye, and the difficulty of adapting suitable glasses.

With the utmost care in diagnosis, for many, very many years, the writer has found it difficult to pre-judge the character of the opacity as respects consistency, and the liquid variety is perhaps the only one he has been able to distinguish with certainty. Liquid cataracts are generally of large size, seem to press against the iris, and now and then plug up the pupil. They are of a pale, dingy, reddish, yellow hue, somewhat striated, and almost invariably of deeper color at their inferior portion. They cause perfect blindness. The solid, or hard; caseous; floccose; and milky, or fluid; are the varieties of cata-

ract which have been treated by the writer. He has never witnessed an example of black cataract. Of the four varieties, the hard and milky are most susceptible of prompt relief. The caseous is frequently indepressible, and the floccose always so, requiring, in many instances, repeated secondary operations before sight could be restored.

For the operation, a clear, mild light with a northern exposure is best, and the patient may either sit in a common chair of proper height, with or without a back, supported by an assistant standing behind, so as to steady the head of the patient, pressing against his breast. Or the surgeon can operate by standing, or sitting behind the patient, which is, perhaps, the most favorable position. The face of the patient should always be so disposed as to secure to the operator a distinct view of the pupil and opacity. Invariably the pupil should be dilated preliminary to the operation, and for this purpose a strong solution of atropia, or the extract of belladonna, or stramonium may be used.

The exposure and fixation of the eye may be effected either by the use of a speculum, or by the joint agency of the index and middle fingers of the operator and an assistant; and when the latter are employed, the operator invariably should depress the lower lid, the assistant at the same time pressing the upper backwards and upwards so as to wedge it between the bony orbit and globe of the eye firmly, the finger pressing the corresponding portion of the eye as well as the lid. When the speculum is used, care must be taken not to apply it with power sufficient to cause pain or to bruise the conjunctiva.

Every preliminary having been arranged, the surgeon may commence the operation by entering the selected needle one or two lines from the corneo-sclerotic junction behind the iris, next to the external canthus, and at a point a line or two below the horizontal semi-diameter of the globe flatwise. The point, after entering the cavity of the eye, should be carried horizontally through it, in a line midway between the anterior surface of the opacity and the iris, but inclining slightly backward,

until it appears in the centre of the pupil. It must now be directed to the centre of the opacity, plunged into its capsule, and so manipulated as to lacerate that structure extensively. The needle should now be carried a few lines farther into the eye, turned flatwise, then placed upon the superior border of the cataract, and by a depressing movement downwards and backwards, that body must be displaced into the bottom of the eye, and beneath the vitreous humor if practicable. After a few moments the needle may be withdrawn, but with a gentle rotary motion, with the point inclining in the direction of the corresponding temple. If the opacity reäppears in the pupil, it must be re-depressed, and it is always best to continue the needle in the eye until the opacity seems firmly fixed in the bottom of it; or is to be regarded as of the indepressible description, and if so it must be mutilated and cut to pieces with the needle, and trusted to solution and absorption for its removal. A hard cataract can not in every case be depressed perfectly at the first, or even after several trials; nor can it be determined at once in some instances that the cataract is of the hard and depressible kind. Attempts to depress, however, repeated several times will ultimately remove all doubt.

After allowing sufficient time for the reäppearance of the opacity and it does not rise, the needle may be withdrawn and the speculum removed, the lids at the same time being closed. The eye now must be instantly covered with a soft compress saturated with cold water and continued until the organ becomes easy, or comparatively so. It may then be removed and trials made of the degree of sight secured, but only for a few moments, and not in very strong light. The eye should now be closed and covered with a moderately soft cataplasm of coarse slippery elm bark powder supported by a suitable bandage. In this condition the eye-dressing may remain for two days, taking care, however, that the cataplasm is kept soft by wetting occasionally with cold water. The patient, if practicable, ought to maintain the erect posture, sitting or standing, day and night, for three or four days, as recumbency would en-

danger the reäppearance of the cataract. In six or eight hours rubefaction may be established over the mastoid regions, either by mustardizing or cantharidization, with the design of preventing inflammation of the eye. The room must be kept dark, conversation inhibited, the diet restricted, solubility of the bowels maintained, the animal warmth carefully regulated, catarrhal influences guarded against, and, if much traumatic pain follows, a commanding anodyne must be given.

Should intense pain of the eye, brain, or forehead occur after ten hours from the operation, the patient must take half a grain of tartar-emetic in watery solution, to be repeated once in twenty-five minutes until brisk nausea or vomiting follows, which will generally relieve the pain and greatly mitigate the resulting inflammation should it take place.

After two days have elapsed, fresh cataplasms may be applied, or sooner if the first have become uncomfortably dry and hard. The new ones should always be in readiness before the old are removed, and the room must be carefully darkened beforehand. The patient should be cautioned against opening the eye, as there is always great danger to be apprehended from the admission of light at this time. The cataplasms may now be removed daily, or night and morning, if preferred by the patient; and they must be kept up until the conjunctival redness greatly or entirely subsides. It will not be safe in any case to examine the eye sooner than the fifth day, and if much inflammation has followed, the examination should be still further delayed. Should intense inflammation supervene, nauseating doses of tartar-emetic, taken two or three times daily, are the most reliable as well as effective means for its correction as constitutional medication; and cataplasms, already referred to, or freshly prepared mucilage of the bark applied with compresses form the best topical application. When the iris becomes involved in the phlogosis, as will occasionally happen, atropia or belladonna might be employed once or twice daily to prevent contraction of the pupil; the extract of the stramonium may

also be used for the same purpose, and the writer has found it quite useful.

After the cataplasms are discontinued, should the eye become unduly warm, red, or otherwise disquieted, nothing relieves so promptly as the cool elm-bark poultice, and it may be resorted to and used as long as necessary. The writer has in some cases found it necessary to recur to the elm-bark cataplasm, occasionally, many weeks after an operation.

As soon as it is safe, the eye may be examined, which, in favorable cases, will be on the fourth or fifth day. The cataplasm must be removed, and the parts covered by it carefully washed and wiped dry. The room being darkened, the eye may now be opened and examined, but must not be kept open very long at a time. From day to day the examinations may be repeated; and, as the redness disappears, the eye can longer be exposed to the air and light. Finally, the cataplasms may be laid aside, to be replaced by a thick soft compress of old linen or diaper, suspended over the eye by a bandage around the forehead, kept constantly wet with cold water, covered with green or black silk; and this compress must be continued until all undue tenderness of the eye is entirely gone. The exercises of the eye must be very cautiously indulged in, commencing with short trials and gradually increasing them. Glasses should not be used until the eye has been allowed, tentatively, to perform its visual exercises for some time without them, only so far as may be necessary to make a selection of suitable ones; and when first used must be employed rather in a tentative manner. The restrictions on diet must not be hastily discontinued; and patients should guard against exposure to catarrhal influences for months after they seem to have recovered from the operation. The writer has known terrible inflammations of the eye from exposure, months after patients seemed to have recovered from couching.

For keratonysis or the operation through the cornea for puncturing, lacerating, cutting up, and mutilating the opaque crystalline lens, the same preliminary measures as advised in

couching are to be adopted. For this operation, too, an instrumental speculum, or digital fixation of the eye may be employed, as the surgeon prefers or finds most convenient. The crank needle or one curved after the manner of that used by Scarpa, is now to be employed. When the crank is the selected instrument, it is to be introduced through the cornea a line or two within its border, and the point directed through the pupil and plunged into the opaque mass. The needle is now to be rapidly rotated between the thumb and fingers, taking care that the point and arm supporting it shall act upon and through every portion of that substance.

When the curved needle is used, it may, like the crank, be entered at the border of the cornea, at any point most convenient to the operator, and after gaining the opacity and boreing or cutting through it in different and varied directions, as well as by rotating it like the crank, it may be withdrawn. In entering these instruments, as well as in directing their points through the corneo-iritic cavity and pupil, care must be taken not to wound the iris. When the pupil is well dilated, and the cataract proves to be hard, the curved needle may be used through the cornea very conveniently for the purpose of depression, keeping the point upwards, so as not to endanger the floor of the cavity of the eye from wounding.

The operations under this head being designed chiefly to disturb the opaque mass, by separating its fragments, and thereby placing them under the influence of the dissolving powers of the aqueous humor more completely, may be repeated after intervals of one or two months until the eye is clear, but care should be taken not to do so until the inflammation of a previous operation entirely subsides. The operations through the cornea, however, are rarely followed by much inflammation, and in many cases intervals of two or three weeks will be long enough.

The after-treatment should be precisely the same as that advised in couching, with the exception of not keeping it up so long. Very frequently the eye can be turned loose in three

days, only using the wet compress and shade until the redness disappears from the conjunctiva.

Keratonysis is also applicable to the treatment of hard cataract when it refuses to remain depressed, and the writer has employed it in such examples very frequently with complete success. Hard cataracts, in some instances, although quite firm, seem to be too light to remain depressed, and if they are not carefully deposited beneath the vitreous humor will pretty certainly rise. They may possibly resemble the porous density of pumice-stone. Hard cataracts, however, of the most solid and dense description, after being removed from their capsules, and subjected to action of the aqueous humor, become spongy and float in that fluid; and when they reäppear it will always be more advisable to trust the cure to mutilation and absorption of them than to farther depressing efforts.

The operation of reclination, evidently a variety of couching, the writer has never attempted, nor has he been able to discover that it possessed any advantage over couching, or any of the other methods of operating on the eyes for cataract. Extraction he has only attempted in two instances; in the first, for the removal of an opaque lens, which operation failed in curative benefit; the second, for the dislodgment and extraction of an original formation in the corneo-iritic cavity, with entire success. Graefe's operation for the extraction of cataract, of course, he has never attempted, nor would he be likely to do so after having succeeded in so many operations by couching and keratonysis. Out of more than eight hundred cases only five unfortunate terminations followed; and disastrous inflammation, the result of defective nursing attentions, and the imprudence of patients defeated the operations in those cases.

Couching and keratonysis are comparatively painless operations, are invariably successful in the restoration of sight sooner or later, if the visual impressibility is sound, no adhesions exist to impair the offices of the eye, the operations properly executed, and no disorganizing inflammation follows. These operations, too, can be repeated again and again if necessary, are

not liable to be followed by deformity even in the slightest degree, and the vision they secure is apt to be permanent. It has been stated that couching was sometimes succeeded by amaurosis, and the cataract pressing upon the optic nerve was supposed to cause it. If such a result is liable to supervene upon couching, it must be uncommon, as the writer is confident that more than two-thirds of his cases were depressed without the occurrence of such an accident in a solitary instance. Extraction, even when performed in the most skillful manner, is followed by more or less deformity of the eye, especially in the cornea and pupil; the former being in a degree flattened and puckered at the corneo-sclerotic junction, while the latter is eliptical or otherwise misshaped, and sometimes contracted. The escape of the vitreous humor, too, has been followed by permanent diminution of the eye, and virtually its destruction. The escape of this, however, is a serious accident, as it virtually disorganizes the eye, while the escape of the aqueous is only an inconvenience to the operator at the time of operating, and is replaced in a few hours. Couching, when succeeded by violent inflammation, may be followed by disorder of the iris and pupil, and in one case which was treated by the writer, shrinking and flattening of the ball occurred with permanent loss of vision. If the pupil is well dilated, and its borders as well as the floor of the globe of the eye escape injury during the operation, couching is rarely succeeded by violent inflammation, which is the chief cause of failure; and such injuries, the writer believes, are the principal causes of the inflammation after couching. With these impressions, he could never incline to adopt the method of Graefe should extraction ever become a greater favorite with him than now.

In the early part of this paper tartar-emetic was advised for the purpose of preventing inflammation after couching and the operation of keratonysis. This is the internal remedy upon which the writer chiefly relies, and if employed judiciously will rarely fail either in preventing it or imparting to it mild characters should it supervene. Rubefaction or vesication over the

mastoid regions, however, should never be omitted. The elm-bark cataplasms are decidedly the best topical means, as they not only exclude light from the eyes perfectly, but also ward off inflammation by maintaining the skin of the lids and contiguous parts equally moist and soft, as well as of equable temperament at the standard of health. Soluble bowels, invariably, should be maintained, and restriction on diet can not well be continued too long.

Should violent inflammation follow, antimonials, leeching the lids and contiguous parts, active purging, perhaps general bleeding, cold cataplasms of elm-bark powder, a rigidly restricted diet, and a dark room will in the main constitute the course of treatment demanded. In all of the inflammations of the eyes, tartar-emetic administered in nauseating and vomiting doses is chiefly to be relied on, and when they fail it is generally because their employment was directed by indecision, or too soon abandoned. This is the language of experience on an extensive scale, and of many years of careful observation, and it is the practice the writer now pursues. In protracted inflammation of the eyes, the writer has derived the best effects from blistering the lids and parts immediately contiguous. He is confident the eyes were saved by it in several cases The remedy is far less painful than one who has never employed it would suppose.

Couching once so popular has fallen into disrepute, or become unfashionable, especially with ophthalmic surgeons. Graefe's method of extracting cataracts seems to have taken the lead upon the continent of Europe, and is gaining upon American ophthalmologists to some extent, who, of course, denounce couching to some extent, and never practice it.

It seems strange that so easy, safe, painless and successful an operation as couching, with its modifications, should have been superseded by extraction, which, to say the least of it, is comparatively difficult of execution, painful, unsafe, and uncertain in its results. These operations are both scientific but differ in complexity.

The writer, although of humble pretension, is of course an advocate of couching, and expects to prefer and practice it as long as cases of cataract present themselves to him and he can see the point of his needle; and this preference all liberal and candid members of our noble profession must admit to be well and abundantly sustained, as it is chiefly based upon the contributions through this paper.

In the cases, numerically referred to, exceeding 800 in number, sight was so perfectly restored as to enable the individuals operated on to read their Bibles, newspapers, and all ordinary publications; as well as to write, sew, etc., and generally with the aid of glasses; and in no instance has sight suffered decay from lapse of time. Hundreds of individuals scattered in every direction are now living, the happy recipients of sight from couching performed on them many years since. In no instance, as already stated, as far as the writer has been enabled to learn, has sight been lost, or even impaired by lapse of time, or any of the reputed, or, rather, the imagined pernicious effects of couching. The confidence of the writer in its efficacy and entire safety is firm and unaltered, supported as it is by his individual experience, by no means limited; and by the testimony of hundreds of living witnesses who were the happy recipients of its incomparable benefits.

Speculum considerably under size, perhaps one-half or more. The wings are slightly concave, both at their extremities and on the opposing faces, so as to adapt them to the rotundity of the ball. These wings are double, and can be approximated or separated by a slide on each supporting arm, so as to adapt the instrument to large or small eyes. The slide on the arms form-

ing together the handle, regulates and adapts the wings, which more properly might be termed speculum, to the globe as well as to the separation of the lids. By examination of the engraving I think the form of the speculum can be understood.

Art. II.—A Case of Bucnemia Tropica; or, "Elephantiasis Arabum." By E. R. Duval, M. D., Fort Smith, Ark.

Mr. S. Douglas, aged thirty-nine years; married; by occupation a farmer; resident of Sebastian county, Arkansas; five feet eleven and a half inches high; dark hair and eyes; nervo-bilious temperament; weighed, when in health, one hundred and ninety-six pounds; of the "rheumatic diathesis"; was first seriously attacked with rheumatism of the joints of the lower extremities in the year 1862. He had no treatment except that of a domestic character until 1866, when he became the patient of a homœopathic physician, and was by him treated until 1869. The disease was not checked, but gradually advanced, invading successively the joints of the upper extremities from the wrists to the shoulder. From 1869 to the present time he has been treated by many physicians of the regular profession, but with no decided benefit. In August, 1872, his feet and legs, to within three inches of the knee, were attacked with erysipelas. Dr. Blakemore, of Greenwood, Sebastian county, Arkansas, was then called in, and has had the case in charge ever since. Under his treatment the erysipelas readily gave way, but no good was accomplished for the rheumatic affection. In a few weeks the erysipelas again appeared, invading the tissues in the same situation; again it gave way under treatment, and the patient flattered himself that his unwelcome visitor had gone never to return; but his hopes were soon dashed by a recurrence. This time the invasion was deeper and more general, extending within two inches of the knee-joints. Infiltration soon became extensive in the cellular tissues; the skin, from its bright red, assumed a dusky hue, roughened and nodulated; in

a word, it looked and felt just like elephant's hide. By degrees the tumefaction increased, and the peculiar characteristic bucnemic condition more defined; until now, the dimensions of the feet and legs are as follows: Length of feet, 14 inches; across instep, 24¼ inches; across ankle, 21 inches; across toes, 22½ inches; around legs, 20 inches.

The toes are in an ulcerated state, and the skin over the internal and external maleoli is gangrenous. The odor constantly arising exceedingly offensive, and can only be partially destroyed by carbolic acid and other disinfectants. The sensibility of the dermoid tissues is very great, the slightest touch being appreciable. Notwithstanding the great weight of the diseased mass, the heels can be raised by the patient one-eighth of an inch, and the toes can be by him flexed and extended.

The legs above the knee are *very* much atrophied, but the body above the hips seems to be well nourished. The rheumatism has left no joint unaffected, and its results have made sad havoc with their functions. None of them are even partially useful. The fingers are *permanently* contracted, and he is unable to move either hand. His spine along its entire course is exceedingly sensitive. He has a cataract of the right eye. His brain is active, and his intelligence *very good*. The lungs, heart, arteries, and kidneys are all in a healthy condition. His liver is a little torpid, yet his appetite is good and the digestion normal; assimilation, while not perfect, is sufficient to give the patient the appearance of good health. The skin is clear, and the complexion ruddy.

His posture since August, 1872, has been half sitting, half reclining. The half chair, half bunk in which he passes his *whole* time, day and night, while rude in its construction, is perfect in meeting the various wants of his afflicted nature. It is his own invention, its present completeness having been reached by improvements made from time to time, as his necessities required and his ingenuity dictated.

The treatment has been eminently conservative. Supportive remedies have been resorted to constitutionally, and the local

application of carbolic acid in solution to the feet and legs, with other and like local remedies from time to time as varying indications might demand.

The question of a radical interference was fully discussed in a consultation held on the 31st of January last, participated in by Drs. J. W. Davis, J. W. Breedlove, W. F. Blakemore, A. Dunlap, and E. R. Duval, and DECIDED AGAINST UNANIMOUSLY. It was agreed that in his otherwise sadly diseased condition, neither amputation, nor ligation of the femoral arteries would likely avail anything other than a hastening of death. The patient expressed himself as decidedly opposed to operative interference upon the ground principally that, even if he survived an operation, his condition would not be improved. He was unwilling to take so great a risk with such feeble prospects for improvement.

The rarity of the disease in the United States, together with the peculiar interest surrounding the case as above described, is my excuse for publishing it to the medical world.

After the above report was written, Mr. Douglas' condition remained nearly in statu quo, his general health possibly slightly improved. The approach of summer, with its enervating influences upon one so long *afflicted*, naturally, in his own and in the minds of his relatives and friends, excited great fears that he could not survive the heated season. The offensive putrid emanations arising from his diseased members, it was reasonably feared would produce in him septicæmia, and probably cause his wife (whose constant care and devotion to him by day and by night rendered her particularly susceptible) an attack of typhoid or some other essential fever. In consideration of these facts the patient, and those in him most directly interested, began to favorably discuss the propriety of surgical interference; this discussion culminated in an invitation to Drs. Dibrell, of Van Buren, Blakemore, Breedlove, Barnes, and Bennett, of Greenwood, Mottu, of Sugar Loaf, Davis, of Eureka, and Dunlap, Bailey, and Duval, of Fort Smith, to meet in con-

sultation at the house of Mr. Douglas on Monday, April 6.

Accordingly, at 9½ A. M., of the day fixed, all of the abovementioned physicians, with the exception of Dr. Dunlap, whose professional engagements forbade his presence, met for consultation. The question of amputation was fully and freely discussed, and it was decided that a dual amputation should be performed at the middle third of the femur. The patient was made acquainted with the decision, and fully apprised of the dangers that encompassed him if he submitted to the operation proposed. He readily yielded his consent, being fully prepared by long suffering and prayerful consideration to meet any emergency. His resignation was that of a brave man made firmer by the strengthening influences of an enlighteend Christian fortitude.

At 10 A. M. one grain of muriate of morphia, with twenty grains of potassic bromidi, was given, and at 10½ o'clock one ounce of good whiskey was administered. The bromide was given upon the assumption that it possessed the property of counteracting the gastric depression which follows *almost* invariably the exhibition of chloroform by inhalation. At 11 A. M., the patient was promptly chloroformed by Drs. Dibrell and Bennett, moved from his bunk (in which he had been almost stationary for twenty months) to a table. Drs. Breedlove and Davis controlled the circulation, and both limbs were then amputated at the middle third of the femur by the flap method (antero posterior). Drs. Bailey, Blakemore, and Mottu, assisting in ligating the arteries; indeed, all present, by their prompt, skillful, and opportune aid, did much to facilitate the operation. Very little blood was lost, probably not exceeding ten ounces. The amputated limbs weighed each twenty-eight and a half pounds.

The shock seemed scarcely equal to that of a single amputation of the thigh in its lower third. At no time from the beginning to the close of the operation did the pulse exceed ninety per minute. The chloroform administered was one and a half ounces. The nausea following was insignificant. Arteries in-

cluding the femoral, to the number of twenty, were tied in each limb. This was rendered absolutely necessary by the great number of collateral branches.

When the dressing was completed, the case seemed more promising than the most sanguine of us could have expected. It was agreed that a physician should remain with him constantly, whose duty it should be to watch him closely, and enforce rigidly the supportive plan of treatment. Dr. Breedlove was first placed upon post, and considered his charge as doing *well* until 2 A. M., of the 7th, when pains of an excruciating nature attacked the patient in both hip joints and thighs. Neither opiates, stimulants, nor antispasmodics, although freely given, relieved, and within an hour the pulse began to flag, and other evidences of prostration became manifest. As the depression continued to increase, Dr. Breedlove sent for Dr. J. W. Davis, who lived three miles distant. He arrived at 8 A. M., and upon consultation the treatment was persevered in. At 9 A. M., Drs. Blakemore and Bennett, of Greenwood, arrived, and it was agreed, in addition to the stimulants and opiates, to apply to the seat of pain, cloths saturated with chloroform. This gave relief, and little pain was afterward complained of. The depression continued to increase, and at 2 A. M., of the 8th, thirty-nine hours after the operation, the patient, in full possession of his mental faculties, died by asthenia.

Those not fully aware of the exact pathological condition, and the circumstances surrounding the subject of this report, might question the wisdom of the dual amputation, and conclude that it was ill advised, and that better prospects—probably *success*—would have followed amputation of *one leg at a time*. The magnitude of the danger of the operative interference adopted, was very fully discussed and well appreciated, yet it seemed, with all the lights before us, not only justifiable, but a necessity, pressing and imperative.

The history of the case subsequent to the operation (for which I am indebted to the assiduous and skillful devotion to the patient of Drs. Blakemore, Breedlove, Bennett and Davis),

shows that death can not fairly be attributed to the shock, or immediate effects of the operation.

The intense nervo-rheumatic pains doubtless were the active and cogent factors of the nervous exhaustion which so soon followed their advent, and led so rapidly to death by asthenia.

This explanation may be too partial, and to those at a distance unsatisfactory, still none can deny that this disease was hopelessly beyond therapeutical intervention. Everything of this character having been tried without avail, and nothing was left but the doubtful appeal to surgery. This was essayed and failed. Although the patient passed a few days earlier to his grave, there is a consolation in knowing that nothing that promised benefit was left untried; and further, that death to him was a sure relief from physical suffering most intense, and opened up the way to *life* and *immortality* beyond the grave.

ART. III.—ON THE TREATMENT, BY ELECTRICITY, OF THE SO-CALLED PROGRESSIVE DISEASES, MUSCULAR ATROPHY AND LOCOMOTOR ATAXY. By A. D. ROCKWELL, M. D., of New York, Electro-Therapeutist to the New York State Woman's Hospital.

Our better and increasing knowledge of the possibilities of electro-therapeutics enables us to modify to some extent the prognosis in these diseases. That the prognosis is grave, can not be denied, but by persistently following out the treatment that of late years has proved so successful, we confidently assert that not only may the progress of these affections be arrested far more frequently than in the past, but that in not a few instances nutrition may be so far improved as to lead to approximate recovery.

In no other forms of disease does it seem to us so important that especial emphasis should be laid on the electrical treatment as in those of the so-called progressive character. In many of the phases of paralysis, in the neuralgias, and in most forms of

local and constitutional disturbance, where the indications call for electricity, other remedies as well have their uses, and in many instances are of even greater service. When we advance, however, to the consideration of those ominously progressive disorders—viz., ataxia and muscular atrophy, we recognize the fact, that with the exception of those cases that depend on a syphilitic taint, our ordinary remedies exercise but little control over their progress.

We have, therefore, almost in despair, turned to the therapeutics of electricity, and although it has failed by far to accomplish all that could be desired, it has yet proved to be more efficacious than is generally credited. Persistent faradization of individual muscles has been alone recommended by Duchenne* in muscular atrophy, and among many others who have reported recoveries by this single and simple method, might be mentioned Dr. Alex. P. Fiddian.

The case† that he details was treated by that form of electricity generated by the old-fashioned magneto-electric machine, and although the authenticity of the statements may not be doubted, yet a knowledge of the combined experience of those who have accomplished most in electro-therapeutics must confirm the assertion, that in order to achieve the best results, both currents must be used and the applications directed to the nerve centres as well as to the affected muscles. As a rule, I alternately make use of central galvanization in its most thorough form, with faradization of the atrophied muscles. At the same time, guided by the indications of individual cases.

I occasionally galvanize the flexor muscles of the affected arm and hand, and more or less frequently submit the patient to general faradization. By the first method (galvanization of the flexors), the spasmodic contractions, which are often so annoying, are almost invariably allayed; and, by the second, we obtain effects of a generally stimulating and tonic character.

The following cases are, in my judgment, fairly illustrative

* De l'Electresation Localisé, p. 702.

† Med. Times and Gaz., Lond., July 20, 1872, p. 66.

of results that may be pretty uniformly expected under the judicious management of the treatment that we are considering:

Progressive Muscular Atrophy of Fifteen Months' Standing. —Apparent Arrest of the Disease under Spinal Galvanization and Faradization of the Affected Muscles.—Mr. D., aged forty-five, was referred to me by Dr. Austin Flint. There was quite extensive atrophy of the interossei of the right hand, associated with very marked diminution of electro-muscular contractility and sensibility. The left hand was somewhat affected, although to a far less degree than the right.

Some fifteen months previously, the patient had observed a certain loss of power in the extensor muscles, with an occasional spasmodic action of the flexors, but there was no appreciable atrophy of tissue until after the lapse of some nine months. The disease had since progressed rapidly and uninterruptedly.

The patient was at once submitted to galvanization of the spine and faradization of all the muscles of both arms and hands.

During the treatment, which was continued at intervals for several months, there was very decided improvement. Sufficient power had been regained over the flexors to enable the patient to elevate the hand, which, for several months had, by its helpless condition, simulated paralysis from lead palsy. The left hand, which was but slightly affected, fully regained its normal strength.

It could be plainly seen that there was increase of muscular tissue in the atrophied parts, but before this was very marked the patient passed from under my observation. Subsequently I received a communication from him, in which he stated that his right hand had gained still more in strength, and to a considerable extent the affected muscles had developed in size.

Progressive Muscular Atrophy, with Paralysis of the Extensor Muscles of the Right Hand—Decided Relief under Local Faradization, Central Galvanization, and Galvanization of the Sympathetic.—A gentleman, aged forty, was sent to me by

Dr. J. J. Crane. There was decided paralysis of the extensor muscles of the right hand, with such marked atrophy of the muscles at the base of the thumb as to cause both the thenar and hypothenar eminences to stand out in bold and angular relief. He suffered from frequent and severe spasmodic contractions of the flexor muscles, together with sharp neuralgic pains in the affected part, and these symptoms, which were first observed somewhat more than a year previously, were ascribed to a violent jerk that he had received at that time.

The patient was treated by central galvanization as well as by galvanization of the sympathetic, and at the same time the atrophied muscles were thoroughly faradized on alternate days. After some twenty seances, it was found that the pain had been entirely relieved, while but little annoyance was occasioned by muscular spasms; the grasp became stronger, and the patient was again enabled to write with some degree of readiness. The treatment was not continued sufficiently long to enable me to test in this case the power of the treatment to increase the muscular tissue.

A symptom which I have now observed in quite a number of cases of muscular atrophy, as well as in other diseases of a kindred nature, when the cervical ganglia of the sympathetic were powerfully galvanized, was very plainly manifest in the above case. I refer to the so-called diplegic contractions, observed first by Professor Remack,* of Berlin. The name *diplegic* (δὶς, and πλησσω, to strike) contractions refers to certain oscillations of the fingers, which are so called because they are produced by placing the electrodes on two different points distant from the muscles in which they occur. In order to produce them, one pole should be placed in the auriculo-maxillary fossa, just anterior to the ascending ramus of the lower jaw, and the other by the side of the sixth cervical vertebra. The strength of current sufficient to cause this effect varies widely.

I have seen it follow an application of but two minutes, and with a current from only ten ordinary zinc carbon cells;

* Application du courant constant au treatment des neuroses. Paris, 1865.

while, on the contrary, I have used a current from more than twenty cells and for five minutes without exciting movements nearly so marked or as long continued. It can hardly be necessary to say that care is needed in any such application; not only that no evil may befall the patient, but as well that the test may prove successful. This phenomenon, observed by Remack, and which was confirmed by Fieber,* by his experiments on the exposed sympathetic of animals, is of interest and of practical value, from the fact that it seems impossible to produce it with any degree of readiness, only when there is actual organic changes in the sympathetic or neighboring parts of the central nervous system; or if this statement appears too positive, it is at least evident that these diplegic contractions must depend upon an abnormally irritable condition of the upper portion of the cord or sympathetic. I have never been able to get these diplegic contractions by galvanizing the sympathetic of persons in health, or when this method of treatment was carried out in conditions of disease widely different from those under consideration. In the case just related, the patient was able to endure a current of far more than ordinary tension, and I found no difficulty in producing very violent oscillations of the fingers.

Muscular Atrophy of Three Years' Standing—Increase in Size of the Atrophied Muscles and Approximate Relief of Associated Symptoms.—In the case of a gentleman who, at the date of writing, is still receiving treatment at my hands, that has already extended over several months, the benefit derived has been of the most decided character.

The first symptoms of the disease were observed three years prior. When I first saw him, there was marked atrophy of the muscles of the right hand, and to a less extent of those of the left; this atrophy, moreover, was making appreciable progress from month to month. There was paralysis of the index finger of one hand and the little finger of the other; sudden

* Die Diplegishen Contrectionen nach Versuchen an Menshen und Thieren. Berlin, 1866, pp. 21, 22, 23.

spasmodic contractions of both hands were frequent and annoying, and there was an utter inability to write. Up to this time the treatment—viz., central galvanization, combined with faradization of the atrophied muscles, galvanization of the flexors with occasional seances of general faradization, have vastly improved the patient in every symptom. The nutrition has been so far improved as to show an appreciable increase in size of the affected muscles; spasmodic contractions no longer annoy him, and he enjoys considerable facility with the pen.

These, with other cases that I might record, teach that the prognosis in muscular atrophy is not *altogether* so discouraging as we are too apt to believe; and when we come to apply the test of clinical experience to that kindred disorder—progressive locomotor ataxy—we find much to encourage, although perhaps nothing to excite great enthusiasm, nor to afford sufficient basis upon which to build reasonable expectation of complete recoveries.

We must be content with alleviating symptoms; the symptoms of neuralgia-spasmodic muscular contraction and impairment of physical coördination; but, above all, we must ever keep in mind that the great virtue of the electrical treatment in these progressive disorders, is its power to so improve the nutritive processes as to arrest degenerative changes of nerve and muscular tissue. Those who are familiar with the German literature of the subject are aware that greater efficacy is claimed for the electro-therapeutics of these diseases than is indicated in this paper. Not a few absolute recoveries are reported by some most reliable authorities, and while the authenticity of their details can not be questioned, it is only too evident that some at least of the cases reported as cured by galvanization, were really not cases of locomotor ataxy, but of some other disease. If taken in its very earliest stage, I suppose there can be no question that a tendency to sclerosis of the cord may be arrested and the associated symptoms dissipated. The difficulty, however, is to detect sclerosis in its incipiency. As a rule, the pathological changes have made consid-

erable progress before their character is appreciated, and the proper treatment is attempted too late to be completely successful.

As a fair illustration or confirmation of these general remarks, I offer the following case, in which a persistent continuance of treatment resulted not only in decided relief of many symptoms, but in an apparently permanent arrest of the disease:

Spinal Sclerosis of One Year's Standing—Alleviation of Associated Symptoms and Arrest of the Disease.—Mr. H., aged fifty-four, came to me January 6, 1870, with symptoms that pointed pretty certainly to sclerosis of the posterior column of the cord.

I sent the patient for further examination to Dr. John T. Metcalfe, who unhesitatingly confirmed the diagnosis and approved the treatment proposed.

Slight symptoms of impaired power of coördination of the lower limbs, with neuralgic pains and anæsthesia, were first observed a year prior, and these symptoms had increased in severity. When he fell under my observation, his gait was uncertain in the extreme, and his utterance thicker and more difficult than normal; he suffered at times quite severely from neuralgia; all four extremities were markedly anæsthetic, so that it was difficult for him to button his clothes, or in any way to use his fingers; and, finally, he was excessively nervous, and suffered much from insomnia. I submitted the patient at first to seances of general faradization, with the result of relieving, to a great extent, the distressing insomnia and the constant nervousness by which he was at times fearfully prostrated. Galvanization of the cord was now alternated with the above method of treatment, and continued with regularity for four months. Sixty applications were administered. When the treatment was discontinued, the anæsthesia, which previously extended from the toes above the ankles, was confined to a small portion of the outer part of the right foot. The fingers could be used with a greatly increased degree of readiness; the power

of coördination was improved to a considerable extent, and the sexual power, which had been completely lost, became measurably vigorous.

I mention this particularly, because it seems to me to point most decidedly to a direct and beneficial influence of the current upon the cord.

This patient is yet living, and so far as concerns the disease under consideration, is as well as when he ceased the treatment.

Posterior Spinal Sclerosis of Six Years' Standing—Persistent Treatment Accomplishes but Little.—Mr. E., a gentleman of about fifty years of age, was sent to me by Dr. Metcalfe to be treated for well-marked ataxy, and I record it only that the disease, in its elecro-therapeutical relations, may be shown in its more gloomy as well as in its brighter aspects. The patient had been a person of great physical vigor, and when in health had been accustomed to exercise in walking to an extraordinary extent. His gait was very uncertain; anæsthesia of the extremities quite profound; bladder impaired in tone, but of the usual neuralgic pains there were none. This case was treated with persistency by both general faradization and central galvanization, but aside from slight improvement in his general condition and some increase in the contractile power of the bladder, nothing was accomplished.

Posterior Spinal Sclerosis of Some Years' Standing—Marked Improvement under Spinal Galvanization and General Faradization.—Mr. S. C. P., aged forty-five, and directed to me by Dr. Austin Flint, had for four years suffered from symptoms unmistakably typical of a somewhat advanced stage of sclerosis of the cord. By the aid of a cane, and accompanied by an attendant, the patient would venture almost daily into the street, but the power over the coördination of movement was so markedly impaired, that it was with difficulty only that he could walk on a level. When he attempted to ascend or descend the stairs, he could execute the necessary movements with assistance only, or slowly and with difficulty by grasping the banister or railing. I submitted him to alternate applications

of spinal galvanization and general faradization. This method was continued a number of months, but the patient was irregular in his attendance; and thus, in a scientific point of view, he rendered the treatment entirely unsatisfactory. The results, however, were important. He gained in strength and in power of coördination to a marked degree. He ventured into the street alone, and could walk readily, without a cane. The service rendered was most decidedly manifested when he attempted to go up or down stairs; this he could do with comparative ease and entirely alone, and what before was impossible—viz., *turning quickly around*, he now accomplished without difficulty.

A word in regard to the methods of electrical application, to which I have alluded in this paper. Central galvanization—a method of application which I have employed with much satisfaction for several years—consists in bringing under the influence of the galvanic current (as thoroughly as may be) the whole of the central nervous system, the brain, spinal cord, and sympathetic. In ataxy it is hardly indicated; galvanization of the cord being as a rule all sufficient; but in muscular atrophy it is frequently of essential service. General faradization is almost always called for in both diseases, but more especially in ataxy, where it is frequently of the most grateful service, relieving neuralgia, dissipating the so-called feelings of extreme nervousness, inducing sleep, and aiding galvanization of the spinal cord in removing anæsthesia and improving the power of coördination.

Localized faradization of the muscles in muscular atrophy should, of course, never be omitted; but it should be remembered as well, that faradization, too violently carried out, may be productive of much harm; not only by its direct action on the atrophied muscles, but possibly by its reflex efforts on the diseased nerve centre. These methods, together with galvanization of the flexor muscles in cases of annoying spasmodic contractions, can not fail when persistently and intelligently attempted to greatly aid the practitioner in his efforts to alleviate the above disorders—fitly termed the "opprobria medicorum."

ART. IV.—SYME'S AMPUTATION, MODIFIED BY GEORGE CUPPLES, M. D., Edin., of San Antonio, Texas. By A. ANSELL, M. D., formerly City Physician of San Antonio, Texas.

The following cases were admitted under my care in 1873, in the Santa Rosa Hospital of this city, and the operations being novel to myself and those present, I have deemed them of sufficient importance to offer a report to the Profession; at any rate, the younger practitioners of surgery will be grateful to learn that a tedious amputation has been rendered comparatively easy by the modification of Dr. Cupples; they will also learn another lesson from these cases with respect to the "button-hole."

CASE I.—Frank Butler (colored) aged fourteen, of spare habit and anæmic, had both feet frozen on the night of the 26th January, 1873, while pursuing a journey between Austin and San Antonio (sitting still on the driving box of a carriage). I saw him next day at his parents' house, and advised him to go to the Hospital, this he persistently refused to do; both feet were swollen, tense, and devoid of sensibility. I advised cold applications to be applied; the boy was then removed to some out of the way place on the suburbs of the city, and I did not see him again until the 13th of February, nineteen days after the first visit; both feet were gangrenous, the left having lost three toes and the right two, the anterior portion of both feet were in a sphacelated and vesicated condition; line of demarcation well defined. He was admitted to hospital this day.

February 14th.—In consultation with Dr. George Cupples, it was decided to amputate so soon as the patient's condition should be improved. Ordered generous diet, tonics and wine.

February 16th.—His condition being deemed sufficiently improved, preparations were made to amputate both feet. The patient being anæsthetised (imperfectly) with chloroform, Dr. Cupples proceeded with the amputation, premising that he intended to modify "Syme's Method"; the operation was thus performed. An incision commencing at the *anterior* aspect of the external maleolus was carried *forward* and across the plantar

surface to the centre of the internal maleolus, thus making nearly a crescentic incision, the flap was dissected *as far as the tubercle* of the os calcis only, another incision was now made across the dorsum of the foot, from a point commencing at the point of the first incision to the terminal point of the plantar flap; the anterior and lateral ligaments being divided, the joint was opened; *the vessels were ligated as divided; the foot was then seized and forcibly depressed, causing the Tendo-Achilles to tear or pull off the calcaneum;* little or no dissection was needed, separation being accomplished by force, more than by the aid of the scalpel. While dividing the tendon, the patient drew up his leg, causing the operator to accidentally *wound the integuments posteriorly* (the which it will be seen was an advantage); the processes of the maleoli were removed, and stump washed with a solution of the chloride of zinc (1 to 40); flaps were united by silver wire sutures; five ligatures had been applied. At this juncture the patient gave evidence of profound narcotism, and it was found that six ounces of pure German choroform had been administered; the patient, however, reacted after long and tedious labor, but it was deemed inexpedient to proceed to the other amputation; patient was removed to his bed. At 6 P. M., visited; fully reacted; is restless, turbulent, sullen; refuses all nourishment or assistance. Ordered morph. hydrochlor. gr. $\frac{1}{8}$; brandy, ℥ss.

February 17th.—Passed a good night, looks bright, relished his breakfast.

The second amputation was performed to-day; the operation was a counterpart of the former, *except that the operator did not wound the integuments;* the operation was completed in fifteen minutes; the patient was completely anæsthetised throughout the entire time with ℥iv. of chloroform; patient reacted immediately; stump dressed as the other.

February 23d.—Doing well; stump *with button hole* progressing better than the one without; removed several sutures; three ligatures; syringe the stumps with sol. zinci chlor. (1 to 60.)

February 28th.—All the sutures and ligatures removed;

stump supported by adhesive strips; button-hole stump firmer than the other; on the former he can bear firm pressure, on the latter he can not, in this we have three fistulous openings.

March 3d.—Button-hole stump completely well, the other still discharging.

March 7th.—Discharged from hospital, left stump rather puffy and disposed to secrete pus yet.

CASE II.—Jose Reyer (Mexican); aged thirty-nine; a wagon driver; short, stout muscular stature, had both feet frozen on the night of the 28th of February, 1873, while tending his mules on the road between Fort Concho and San Antonio; was admitted to hospital on the 29th March, 1873. Right foot gangrenous, with loss of four toes; ordered foot washed and dressed with solution of permanganate of potash (1 to 40); generous diet with malt.

April 1st.—I amputated the foot by "Syme's Method" with "Cupples' Modification," as in the other case; no button hole; four vessels ligated; flap united with iron wire sutures; stump dressed with solution chloride of zinc (1 to 60).

April 14th.—Stump looks unpromising, granulations weak and sluggish, leg œdematous, reäcts slowly from pressure; released the stump from all pressure, and enveloped it and entire leg in sol. pot., permangan. and alcohol (1 to 5).

April 16th.—Stump is improved, recovering its vigor, cicatrization proceeding with firmness, *and but for want of a button hole in the posterior integuments* patient could go about; the pus collects and is retained in the flap, and keeps the parts tender.

April 24th.—Stump firmly cicatrized, except at one point, at which there is a slight discharge. Discharged.

The lessons taught in these cases are: First, that the incision commencing anterior to the malleolus and carried forward, gives a longer and better fitting flap. Second, that the tedious and laborious and difficult dissection of the hard, unyielding integuments of the heel, is only carried to one-half the distance to that ordered by Professor Syme, and the rest of the operation

is completed by forcibly tearing off the Tendo-Achilles, instead of dissecting, as in Syme's operation. Third, that an incision made in the integuments is an advantage, and should always be made, as it affords a means of complete drainage. The comparison can be made between the stump having this incision and the other two that were without, and when we reflect on the position of the patient as he lies in bed, and the position of the wound, we at once see how unreasonable it is to expect "water to run up hill." I had performed amputations of the foot before when serving in the army, but never with so much ease and comfort as by the modification of Dr. Cupples.

ECLECTIC DEPARTMENT.

"Carpere et colligere."

ART. I.—THE ANATOMICAL, PATHOLOGICAL, AND SURGICAL USES OF CHLORAL. By W. W. KEEN, M. D., Lecturer on Anatomy in the Philadelphia School of Anatomy. [Read before the Pathological Society of Philadelphia.]

I. ANATOMICAL USE.

In August last, I think, I saw a scrap in a journal simply stating that chloral was an excellent antiseptic. I made no note of it at the time, and almost forgot it till I had a case of caries of the tibia (reported below) in which I desired such a disinfectant, and it occurred to me to try it. The result being satisfactory, when I came on duty at St. Mary's Hospital in October, I tried it on a number of cases (some of which are reported below), and then tried the following experiments with it in my office with a view to its possible use in the dissecting-room.

Experiment I.—October 22, 1873, I placed some mutton with pure water in a bottle, corked it loosely, and stood it on my office table, exposed, say, to an average temperature, day

and night, of 65°, as a comparative experiment. In four days it smelt very badly, and in seven was disintegrated.

Experiment II.—Same date. Mutton in a solution of chloral, gr. ij to f℥j of water, and exposed to similar conditions. November 1 (ten days), slight mould. December 8 (forty-eight days), slight smell. December 25 (sixty-five days), entirely decomposed.

Experiment III. to VI.—Mutton placed in similar conditions October 22, 1873, but in chloral solutions of respectively 5, 10, 20, and 60 grs. to f℥j of water. At this date, March 12, 1874, 141 days, or nearly five months, they are all perfectly preserved, with no smell save that of mutton-fat and chloral, no mould, no disintegration. A microscopic specimen from that in the five-grain solution is exhibited to the Society, to show that the muscular structure is perfectly preserved, as are also all the others.

Experiment VII.—A condyloma, removed December 24, was washed for twenty-four hours in water, and placed, December 25, 1873, in a forty-grain solution. It is still (March 12, 1874), perfectly preserved, and with the other specimens is exhibited to the Society for inspection.

Experiment VIII.—Feeling encouraged by some success, I obtained a fœtus, still-born at full term, and injected it December 10, 1873, as follows: One arm, by the brachial artery (precautions being taken of course to limit the injection to the arm), with a five-grain solution; one leg, by the femoral artery, with a twenty-grain solution; and, by the umbilical cord, the trunk and head with an eighty-grain solution. I used in all two ounces of chloral, and of each solution I injected as much as I could, so that the skin was fully stretched, as if the part were extremely dropsical. I had here a complete comparative experiment, for all the parts of the fœtus were exposed to precisely similar conditions, save the strength of the injection. I left it exposed on a table in a room of average temperature of 59° to 60° Fahr. March 10, just three months later, I examined it carefully. The body appeared perfectly preserved. The

skin was shriveled a little about the finger-nails, lips, eyelids, and scrotum, from evaporation; and toes were as plump as ever; the epidermis was slightly loosened. The head and neck, which were very much congested and discolored when received (a consequence doubtless of its being still born), were of the same dark color, but no decomposition had ensued; and the common toilet pins with which I had closed the incisions by which I reached the arteries were perfectly untarnished. On opening the parts, injected with five, ten, and forty-grain solutions, and examining them, they appeared as firm as ever, all of natural color and consistence, and the microscope (one-fifth) showed no change in the muscular structure even with the five-grain solution. In order, however, to have a more careful examination, I gave Dr. J. G. Richardson a scrap of muscle from the ball of the thumb in the five-grain arm, another from the twenty-grain thigh; a slice of the tongue, which, as the mouth was open, had partly dried, but was covered with a cheesy coating (hence, probably, the torula reported below), and a piece of the parotid gland. He kindly examined them with great care, with a one-twenty-fifth in. immersion lens, eye-piece A, giving 1250 diameters, and reports as follows:

"A small piece of muscular tissue from the palm of the hand (five grains), teased out in a drop of chloral solution, showed the individual fibres with remarkable distinctness, the transverse striations being unually well defined, and the whole structure quite free from granular or other degenerative change. (The specimen was shown by the class microscope.)

"A similar fragment from the thigh, injected with a twenty-grain solution, was likewise admirably preserved.

"A thin section from the tongue exhibited muscular fibres in the state of complete preservation; and in these, by the aid of acetic acid, the oblong and rectangular nuclei under the sarcolemma were clearly brought into view. A minute shred snipped out from the upper surface of the tongue displayed the filiform papillæ very distinctly, and furnished numerous cells of tessellated epithelium, presenting all the characters of epithe-

lium, in a drop of flesh saliva. Multitudes of isolated torula spores and a few short chains of torula accompanied this section.

"A thin section from the parotid gland showed the lobules of the glandular tissue almost unaltered, and, on the addition of acetic acid, the usual sharp definition of the nucleus in each gland-cell was obtained."

(An incision was made into one leg, and the above gross appearance were shown to the members.)

I have coated one arm with varnish and the other with rubber dissolved in benzole. I propose, after having exhibited it here to-night, to place one leg in a bag of saw-dust and the other in a bag of sand, and leave the remainder of the body exposed to evaporation during the next few months of hot weather. This will give me the means of determining whether the chloral will preserve the subjects in hot weather, and of testing the best means of preventing evaporation. The results I will communicate to the Society in the fall of this year, whether they be good or bad, together with the results of any other experiments.

Experiment IX.—A negro subject was brought to my anatomical school February 23, 1874, in good condition as to preservation, but with the entire spinal cord removed, one leg off above the knee, and one femoral artery opened. It was, therefore, a very unfavorable subject to begin on, as so much of the solution must escape through, at least, the small arteries, which were cut. A half-pound of chloral, in the strength of 15 grs. to ℥j of water, was injected by the carotid the same day. The body was placed on the dissecting table March 2, and has been almost entirely dissected since then. The cuticle was very firmly adherent. The muscles were of the most life-like color, a little flabby, perhaps, but not in the least easily torn. All the other parts, also, were of the natural color, texture, and condition, so that, for example, the aortic and other sympathetic plexuses were readily dissected. The odor of chloral was perceptible, but not at all offensive. March 7, the viscera were

removed, and, instead of the usual fœtid odor, which is so annoying, especially from its persistence on the hands, there was scarcely any smell. It was but slightly that of chloral, and not disagreeable. This was twelve days after the injection. (Specimen shown.)

Experiment X.—A negro died in the city February 18, and lay exposed during the warm weather we had then till February 28, when he was brought to my rooms. The cuticle was off over all the chest, which was green and crepitant, and the legs were dropsical. A more unfavorable subject for preservation I have never had. Though a large man, I tried the chloral, on February 28, in the same strength and amount as in the last case—viz., gr. 15 to ℥j. March 12—i. e., twelve days after injection and twenty-two days after death—the subject is perfectly preserved. The cuticle elsewhere is adherent, the chest is natural in color, the smell is gone, and the specimen of muscular tissue which I exhibit, though taken from the abdominal walls, the most unfavorable part of the body, is of admirable color and consistence.

The next subject I obtain I shall inject with one-fourth of a pound of chloral, and instead of the ordinary amount of water (a gallon to a gallon and a half), I shall dissolve it in not less than eighteen or twenty pints—that is, about five or six grains to ℥j; for my short experience seems to show that if the parts are fully and most completely distended they are preserved better, probably because the chloral penetrates more thoroughly into every minute capillary. In order to give a little more firmness to the muscular tissue, I shall also inject a pound or two of starch, dissolved in water and mixed with the chloral solution, and make a future report of the results.

It is important that I should not be understood to claim, as yet, that chloral will answer for the dissecting room, to the exclusion of everything else. I have not had any experience beyond the mild winter we have so far had, and during a period of five months. What effect the hot weather of summer, with its moisture, will have, I can not yet say, but hope to do so in

the fall. Thus far I can claim for it entire superiority, in the winter time, for all dissections, and especially for the finer and more delicate ones of the skilled anatomist. Its comparative merits may be summed up as follows;

1. *Cost.*—The price of chloral is about two dollars and fifteen cents per pound; and if one-half or one-fourth of a pound will do for each subject, the cost will be from one dollar to fifty cents for each subject. Chloride of zinc, or arsenic, costs about fifty cents for each subject.

2. *Condition of the Tissues.*—Zinc hardens, discolors, and decolorizes the tissues to such an extent that, for both dissection and operative surgery, they are rendered totally unfit to give a student the proper notion of their normal color and consistence. Besides this, many parts, such as the axilla, with its entanglements of blood-vessels, nerves, muscles, glands, etc., important to be well dissected, are in such a discolored, dirty condition as hopelessly to bewilder the most earnest student. Alcohol is better than zinc, but it also hardens and decolorizes. Arsenic, also, is better, but the tissues become very soft and offensive in a little while, besides the frequent annoyance of local poisoning about the fingers. Salt and nitre subjects have the same objections (except the poisoning), and also nearly always mould in a short time. Chloral keeps the color perfectly, and the parts are of their natural consistence for at least three months, and probably much longer. By this means far more delicate and useful dissections can be made, and the student has a correct idea of the condition of the parts just as they were in life.

3. *Subsequent injections* into the arteries, etc., can be made with far better effect, since none of the arteries are at all contracted as they are by the astringent action of zinc; and the injection will therefore penetrate much better.

4. *Permanent Preparations.*—I have not yet had time to try this question, and so I do not know how it may act as to heat, moisture, vermin, etc.; but so far as finer dissections and finer injections are concerned, it would seem to promise well.

5. *Odor.*—The chloral odor, in a single subject, is not strong

enough to be disagreeable, but how it may be with a room full of them I am not prepared to say. I intend, however, to try the effect of some of the essential oils, such as cloves, bergamot, rosemary, etc., or a mixture of them; for a fragrant cadaver may entice some otherwise indifferent students to a more thorough study of its texture and tissues.

6. *Instruments and Clothing.*—The destructive action of zinc* in dulling the edge of the best knives, and thus worrying the dissector by the constant use of the hone, or, more frequently, making him careless and slipshod, is well known. Chloral does not affect the knives in the least; and even toilet-pins, after three months in the subject (Exp. VIII.), were not corroded in the least.

II. PATHOLOGICAL USES.

Besides the experiments detailed above, I asked Dr. Richardson to examine some pus, which I obtained from the Philadelphia Hospital through the kindness of Dr. Miller, on March 4, 1874. The following is his report, the examination being, as before with the 1-25th:

"*Experiment XI.*—A specimen of pus from an acute abscess, preserved for five days in a five-grain solution of chloral, contained multitudes of well-formed pus-leucocytes, numerous dead (at least motionless) bacteria from 1-20000th to 1-2000th of an inch in length, and considerable quantity of granulating matter.

"*Experiment XII.*—A specimen of pus preserved six days in a twenty-grain solution presented precisely identical appearances; and since the bacteria were about equally numerous, it seems probable that they had developed in the purulent fluid *before* it was mingled with the solution of chloral. On adding acetic acid or aniline to these specimens of pus, the ordinary reäctions were manifested—i. e., the brightening of the nuclei or tinging of the nuclei and the cell-walls."

My own examination coincided with his.

* Zinc being our most common injecting material in Philadelphia, I use it mainly for comparison.

Experiments XIII. and IV.—I examined pus from a chancre, and also pus from an ulcer, with precisely similar results.

These experiments, as well as those given before, but especially the microscopical results as determined by Dr. Richardson and myself, at once suggest the query whether chloral in solution may not replace alcohol in the preservation of permanent wet preparations in our anatomical and pathological museums. It will be observed that the solutions varied from five to eighty grains in strength; the specimens were mutton, a condylomatous tumor, human muscular, epithelial and glandular tissues, pus from an abscess, an ulcer, and a chancre; the time varied from six days to one hundred and forty-one days; the conditions were unfavorable for their preservation; yet not only were they all preserved microscopically, but even the delicate cellular tissues were preserved microscopically; and further still, the bacteria already developed were killed even by a five-grain solution. Whether this preservative power will hold good for all sorts of wet preparations, for a longer time and in hotter weather, I do not yet know, but it will certainly do so for those named for five winter months, and probably longer.

If we can use it in place of alcohol we gain very greatly, first, in the lessened expense; for a solution of ten or twenty grains to the ounce is far less expensive than alcohol, and the bottles, instead of being hermetically sealed, need only be closed by glass stoppers, or even by ordinary corks. Secondly, this renders them entirely accessible for study at any time, whether in investigating any particular subject or specimen or for exhibition to a class; and any teacher who has used permanent preparations, hermetically sealed in expensive bottles, which can not be passed from hand to hand, which are distorted by the refraction of the liquid and the round glass, and not to be got at to examine accurately what we wish to study, well knows how comparatively useless they now are, and how useful they will be if chloral should make them accessible. If evaporation take place, the solution is meantime becoming stronger, for only the water and not the chloral evaporates; and an annual or

semi-annual inspection of the museum, with the addition of either water or the chloral solution, will remedy any such trouble. I do not think that chloral in solution changes chemically within at least a year. I have used in some of my experiments solutions in water nearly six months old, and have had patients take the syrup from an old bottleful obtained a year before, without any perceptible change in its action.

In pathological investigations of various fluids, such as pus, urine, blood, the fluids in dropsy, etc., a few grains put into the fluid may be sufficiently preservative, and enable us to keep them for a much longer time for more careful observation. I would suggest that about five or ten grains to an ounce of the fluid would be enough; and it would be better to add it in crystals, for if added in solution it might change the specific gravity of the fluid, and so affect the integrity of the more delicate morphological elements. I would also suggest whether a solution of proper density—varying with the objects to be preserved—might not be of great service for mounting microscopical preparations. Neither of the last two suggestions have I tried myself, except with the pus, which has kept perfectly for eight days; but both are, I think, well worth the trial.

III. SURGICAL USES.

When I commenced my investigations into the action of chloral, I had seen nothing published but the little scrap which filled out a column in a journal, although since then I have seen several notices of its surgical applications. Yet, as my own observations are independent in character, confirm the results obtained by others, and show the value in surgery of a remedy as yet new, I venture to append a few of the more striking cases in which I tried it; in some with good results, in others bad. It acts, first, as a complete deodorant within a very short time, by what chemical action I do not know; secondly, as a stimulant, so that what was a foul, sluggish ulcer will become, in from two to three days, a fine, red, healthy, granulating sore. But it must not be used too strong, or it may be-

come a decided irritant, as any one who has ever taken a dose would naturally expect. I have generally found that gr. x to ʒj of water (or, in private practice, some fragrant water) is quite strong enough. In some cases even this, which is about a two-per cent. solution, is too strong, and has to be diluted. The results of these cases below were most marked in those with foul, unhealthy, ill-smelling discharges, which were changed quickly to healthy-looking sores, with excellent and yet moderate, not abundant, pus. In fact, in every case the discharge was, I think, considerably diminished. I did not find, I think, that the sores healed any more rapidly than they ordinarily would. The application seemed rather to change an unhealthy sore which was stationary, or even enlarging to a healthy one, in the proper condition for the healing process, which soon began and went steadily forward. In no case was its hypnotic action shown.

Whether it will at all destroy the specific poisons, such as that of a chancre, I do not know, for I had no opportunity to try it in the hospital. That it would do well in open buboes, as ulcers, I have no doubt; but the best test as to its possible destructive powers on the virus would be to try the auto-inoculability of a chancre which had been treated by chloral dressings.

I have found the mucous membranes also, as would naturally be supposed, more sensitive to its irritant properties than the skin, but not so much so in some cases as would be expected. In fact, I think it must be tested by experience in each individual case.

Cases I. and II.—One, a case of long standing caries of the tibia, with very ill-smelling discharge; the other, of caries of short duration, but equally bad discharge. I used the chloral (gr. x to ʒi) both as an external application, by which alone nearly all smell was prevented and discharge diminished, and later, in the same strength, as an injection into the sinuses. The injection did not irritate, but yet did no appreciable good other than the external application had already done, though continued for nearly a month.

Case III.—A case of psoas abscess (in which for four years the woman had worn a truss by a physician's direction, for a supposed hernia!). On admission, the abscess was discharging, in the groin, a very offensive pus in large quantities. A ten-grain solution was applied externally, and the odor completely disappeared at once, greatly to her own comfort, as well as that of the other patients in the ward. The discharge also certainly lessened, but I scarcely think it could be from the external application. It must have been from some other cause. As other injections had proved irritating, and she was rapidly sinking, I did not try the effect of an injection of chloral.

Cases IV. and V.—Two cases of large, filthy, and foul ulcers of the leg. I used a ten-grain solution as both a wash and a dressing; in one case mixed with a poultice, in the other simply by a compress, wet with the solution. The poulticed case did so well that all smell disappeared, the ward was freed from its previous contamination, and the ulcer did well. In the other case I had tried transplantation of the skin, and four out of seven grafts had taken root. The continual application of the ten-grain solution on the compress was certainly too strong, for it not only destroyed the skin-grafts, but irritated the adjacent skin considerably. Generally, however, I have not found the constant dressing with the ten-grain solution too strong.

Case VI.—Rupial ulcers, of about the same size, on the leg and arm. As a comparative test, I applied a ten-grain dressing of chloral to one, and touched the other with nitrate of silver, dressing it with simple zinc ointment. They did about equally well.

Case VII.—This was, I think, the best test of all, so far as the deodoring properties of chloral are concerned. I do not say *disinfecting properties*, for I suppose that this is a question for the chemist rather than the surgeon. A young woman was infected by her husband with syphilis, and then he attempted a mercurial treatment. He so far succeeded that when she entered the ward, as I was making my visit, I found half of the teeth out, the rest ready to drop out, the gums sloughing every-

where, and necrosis both of the upper and lower jaw so far progressed that the upper jaw was loosening from all of its attachments. The smell was, I think, as bad as any I ever encountered, and the whole ward was filled with it in a very short time. I gave her a ten-grain solution of chloral as a mouth-wash, and on my visit the next day I could approach within six or eight inches before I was counscious of any odor. Yet the cause of the smell was constant, and the use of the wash intermittent. It was so grateful to her that she used it every fifteen or twenty minutes. The remaining healthy mucous membrane was not irritated. No hypnotic effect was visible from either absorption or the small amount probably swallowed.

Case VIII.—Gonorrhœa. In only one case of this kind have I tried chloral. I directed a one-grain solution, which so irritated the urethra that the patient would not allow its further use; but he was nervous about it, as I had inadvertently told him what I intended to use, and I scarcely trust his report. Parona,* however, reports an extensive use of it since 1870, in men and women, with the best results, in a strength of one per cent., *i. e.*, about 5 grs. to f℥i.

My friend Dr. MacPherson has tried it in several cases, and reports to me as follows:

Case IX.—Cauliflower excrescences of os uteri, with large hæmorrhages and great fetor. During thirteen months he had tried numerous remedies. The only effective deodorant was potass. permang., and this, even in so weak a solution as gr. ½ to f℥i., would irritate the parts so as to reëstablish bleeding. He used chloral, gr. v. to f℥i. The odor was at once destroyed, no bleeding resulted, the discharge lessened greatly, and changed its character to good healthy pus; pain was relieved, and she became able to walk about in ten days.

Cases X. and XI.—Both of long-standing ozœna in scrofulous subjects. A solution of ½ gr. to f℥i., by the nasal douche,

* Med. News and Lib., February, 1874, p. 27, from Med. Times and Gazette, January 3, 1874, from Giorn. Ital. della Mal. Vener., October, 1873.

proved irritating, and they were indisposed to allow further trial.

Case XII.—Syphilitic condylomata on the penis. The smell was almost intolerable from the mingled odors of the smegma and the condylomata. After washing with water, a ten-grain solution of chloral was applied, and the odor entirely removed. A slight balanitis occurred, which subsided on reducing the solution to five grains. The warts were removed, chromic acid was applied, chloral being used as a dressing, and the patient was well in four days, except one very small spot, which soon healed.

Case XIII.—Non-specific severe vaginitis in a child four years old, of strumous constitution. An injection and wash of four grains to ℥i. was used, and no other treatment, and in two days the patient was nearly well.

Dr. Goodell also informs me he has used it considerably of late, and it does admirably as an antiseptic, deodorant, and stimulant.—*Philadelphia Medical Times.*

ART II.—NITRITE OF AMYL AS AN ANTIDOTE TO CHLOROFORM. By WM. C. DABNEY, M. D., Charlottesville, Va.

To obtain an efficient antidote for chloroform narcosis has long been a great desideratum. It is the general belief at the the present day that ether is safer than chloroform, but in many respects the latter is greatly to be preferred. It produces its effects much quicker than does ether; its vapor is not inflammable as that of ether; and it does not generally cause the feeling of suffocation which ether does.

Various means have been used to counteract the ill effects of chloroform when they supervene, depending on the character of the dangerous symptoms. Electricity, cold effusions, and artificial respiration have been the means chiefly employed for this purpose. All of these are possessed of considerable efficacy in certain cases.

We can pursue our studies to better advantage, however, by considering the modes in which chloroform kills. According to Gross (System of Surgery, vol. 1st, p. 563), it may cause death in four different ways, viz.:

1. By Coma.
2. By Asphyxia.
3. By Syncope.
4. By Gastric Irritation.

(*a.*) Coma as a mode of death from chloroform, occurs chiefly in old and debilitated individuals, or in those whose constitutions have been weakened by alcoholic or venereal excesses. It is probably owing to the absorption of the chloroform and its powerful sedative influence over the brain and spinal cord. The action of the heart usually ceases *with or before* the cessation of respiration.

(*b*). Death by Asphyxia is usually caused by the want of a proper proportion of atmospheric air with the chloroform vapor. The air cells become loaded with the vapor of the chloroform, and the blood is deprived of its normal quantity of oxygen. Only our surgeons of the present day, so far as we are informed, believe in this cutting off of the supply of air, and *overwhelming* the patient with chloroform. The respiration usually ceases *first*, the heart continuing to beat some time longer.

(*c*). Death by Syncope is usually due to paralysis of the heart. The countenance, when death is threatened in this manner, is usually very pale, and the pulse very weak and fluttering. The action of the heart ceases *before* the cessation of respiration.

(*d*). Death from Gastric Irritation is very rare, and usually occurs gradually.

The second and fourth modes of death need not engage our attention further in this article. The first and third, which have some features in common, demand further consideration from us.

In both of these, the heart's action ceases before the cessation of respiration; and in both, some powerful stimulant is required.

Having thus examined briefly the modes in which chloroform may kill, and having seen that in two of the modes at least nervous stimulants are indicated, it is advisable that we should examine into the physiological properties of nitrite of amyl.

In 1864, Dr. B. W. Richardson reported to the British Association for the Advancement of Science that "the nitrite of amyl was, as an excitant of vascular action, the most powerful agent as yet physiologically discovered." This report excited considerable interest in this salt; and its physiological properties were made the subject of study and experiment by several physiologists. The conclusions at which they arrived were entirely at variance with those of Richardson, with regard to its action as an excitant of vascular action. Dr. H. C. Wood, of Philadelphia, undertook a series of experiments to determine which of the two accounts as to its action was correct, which experiments, like those of Gamgee and Rutherford, tended to prove that it was not a cardiac stimulant.

In the summer 1872, a case occurred in the practice of my friend, Dr. R. W. Nelson, of Charlottesville, a prominent feature of which was the occurrence of repeated attacks of syncope, which were of very long duration, and from which the patient could with great difficulty be aroused. At the suggestion of Dr. J. L. Cabell, of the University of Virginia, nitrite of amyl was given by inhalation in the dose of four or five drops. Her face instantly flushed up, and she recovered her consciousness almost immediately, and on one occasion, I am informed by Dr. Cabell, when she seemed on the very verge of dissolution.

It may be well to mention here that the nitrite of amyl has no effect on the coägulability of the blood, so far as is known.

Its beneficial action does not seem to be confined to those cases in which there is great pallor. I recently attended a lady suffering from pre-vertebral abscess, who frequently had attacks of insensibility, during which the heart's action was very weak (sometimes imperceptible); but the face was either of natural color or somewhat flushed. At Dr. Cabell's suggestion,

I administered amyl by inhalation in the dose of three drops, with the effect of bringing her to consciousness instantly.

Arguing from the conclusions of Richardson, as to the action of amyl, and also from its action in Dr. Nelson's case, reported above, I thought it might prove of great value in some cases of threatened death from chloroform, and determined to test its value.

My experiments, it is true, have been very few in number, and are not sufficient to lead to any definite conclusions as to its value; but you will see that in three instances out of the four it produced marked effects.

Experiment 1st.—Adult cat. The administration of chloroform was begun at 2:07 o'clock. At 2:15 the cat seemed thoroughly narcotized; the pulse was regular and strong, and breathing normal. At 2:10, the heart's beat was very weak and irregular, and the breathing very slow and labored. At 2:21, the heart's impulse was almost imperceptible; respirations gasping, and at long intervals. Dropped five drops of amyl on a chip and held it to her nose; 2:23, the heart was beating stronger and more regularly; 2:25, heart beating with great force, and the breathing was hurried. She tried to move at this stage, but seemed to have lost all power over the voluntary muscles, except those which move the head from side to side, which responded slightly. At 2:30, she could move her fore legs and body, but dragged her hind legs. At 2:40, she had entirely recovered.

In this case the chloroform was given *gradually* and mixed with a large proportion of atmospheric air.

Experiment 2d.—Adult dog (terrier). The administration of chloroform was begun at 7:23 o'clock P. M. At 7:30, the dog was howling and scuffling, and passed his fæces. At 7:38, the narcosis was complete; the pulse and breathing were regular. At 7:42, the pulse was very weak. At 7:45, pulse almost imperceptible; breathing slow and labored. At 7:46, injected five minims of amyl hypodermically; 7:48, heart beating violently, breathing quick, animal still apparently unconscious;

7:53, could move his head from side to side, but could move no other part of his body. He was then put out of doors (it was winter). At 8:00, he seemed to have entirely recovered. The chloroform vapor was mixed with air and given slowly.

Experiment 3d.—Adult dog (terrier). Chloroform was given till his heart-beat was almost imperceptible, and respiration at long intervals. Injected five minims of amyl; in two minutes his heart was beating with great force, and his breathing was very quick. There were present Drs. Nelson, of Charlottesville, and Shelton, of Galveston, Texas. The chloroform was mixed with air and given slowly.

Experiment 4th.—Half-grown puppy. The administration of chloroform was begun at 11:15, and all air was excluded. 11:18, dog was howling and trying to escape. 11:20, poured on more chloroform. At 11:23, pulse weak and breathing very labored. At 11:25, the breathing suddenly ceased, heart beating very faintly. Stopped the chloroform, and injected five minims of nitrite of amyl, and began artificial respiration, but could not arouse the animal in any way, or get the heart to act. At 11:30, I took out the heart, the right cavities of which were filled with venous blood, and dropped on it four or five minims of amyl. This produced some contraction.

In the first three experiments the chloroform vapor was mixed with air and given slowly. In the fourth, all air was excluded, and the animal was overwhelmed with a large quantity of vapor at once.

In the first three experiments, also, the heart's action was much more affected than the respiration. In the fourth, the respiration had ceased entirely before the amyl was injected.

In the first three experiments the amyl produced a decided increase in the frequency and force of the heart's beats; in the fourth, no effect was produced.

I am informed that the nitrite of amyl has been used in one instance for chloroform narcosis in the human subject with success, but I did not see the report of the case myself, and therefore know none of the particulars.

My own experiments on animals, as I said before, are too few in number to lead to any positive conclusions, but I have brought the subject before the Society, with the hope that some one more skilled than myself in physiological experimentation would test the value of amyl in chloroform narcosis, and give the result of his experience to the Profession.—*Trans. Va. Med. Soc.*

ART. III.—DRAINAGE IN OBSTINATE CHRONIC INFLAMMATION OF THE BLADDER. By HUNTER McGUIRE, M. D., Professor of Surgery, Medical College of Virginia, Richmond, Va.

As far as I have been able to learn, Mr. Guthrie, of London, was the first to propose opening the bladder, when all other means of cure had failed, in cases of chronic cystitis. Sir James Y. Simpson, Drs. Emmett, Bozeman, and Parvin have succeeded in relieving cases of inflammation and ulceration of the bladder, which had resisted all other known remedies, by opening the vesico-vaginal septum. In this way the urine was permitted to drain off as fast as it was poured into the bladder, and that organ was kept in a state of complete repose until the inflammation had disappeared. Simpson operated by introducing through the urethra into the bladder a grooved staff, and taking this as a guide, he cut through the posterior fourth of the urethra, and then extended the incision through the vesico-vaginal walls for an inch. His success in two cases was rapid and complete. The operations performed by the other surgeons mentioned resulted also in entirely relieving the patients.

Mrs. Blank, aged forty-one years, came to me about the 1st of July, 1873, laboring under chronic inflammation and probably ulceration of the bladder. The disease came on about eight years ago, she thinks, in consequence of exposure to cold. It was not very severe at first, and she resorted for several months to some simple remedies without relief. Since that time she

has passed through the hands of a dozen physicians and surgeons, and notwithstanding the most careful and skillful treatment, the disease has slowly and gradually increased in severity. When she came to me her suffering was fearful. Micturition was frequent, and attended by intense burning and scalding pain. Under the influence of the most powerful anodynes, she was unable to sleep for more than half an hour before she was aroused by the vesical and rectal spasms. The urine was usually dark and offensive, containing some muco-pus, and occasionally shreds of lymph, albumen and blood. Her general health was wretched. She was thin, feeble, anæmic, and her countenance indicative of the greatest distress. Finding that she had faithfully tried, and without relief nearly every remedy, local and general, known to the Profession for her disease, I explained to the poor lady the operation performed by Simpson and others, and gave her that hope to look forward to, if all other means failed. I advised her, however, to take an infusion of hops, uva ursi, and cubebs, gave her some directions about bathing, diet, etc., and asked her to let me see her again in two weeks.

She came back at the end of that time without the slightest improvement, and earnestly begged to have the operation performed.

I had on my office table, when she came in, a piece of gum tubing I had prepared to use after the operation for vesico-vaginal fistula, which I expected to perform that day on a patient at the hospital. I intended to use this tubing, instead of Sims' sigmoid catheter, to keep the bladder drained of urine after the operation. This tubing, made of the finest gum, was about twelve inches long, and four inches of it, or that portion which was to be placed in the bladder, had been perforated by a shoemaker's punch, with holes about half an inch apart. I determined to substitute this drainage-tube for the operation of opening the bladder through the vagina. I had in my pocket-case of instruments a silver catheter, which the maker, in order to economize space, had made into three pieces. These pieces screwed together made a pefect catheter. Attaching only the

handle and shaft pieces together, gave me a straight silver tube, into which I passed the gum tubing. The silver tube was then introduced very carefully through the urethra into the bladder, and the gum tube pushed through this until four or five inches had been coiled up in the bladder. The silver tube was then withdrawn, leaving the gum tube in the bladder. Two pieces of tape were then fastened to the gum tube by a solution of gum-elastic and chloroform, and these tapes tied to a band which had been passed around the woman's hips. The drainage tube being thus secured in the bladder, the free end of the tube was put into a common bottle to catch the urine.

Before leaving the patient I introduced a vaginal suppository of morphia and belladonna.

The lady informed me the next morning that she had passed a more comfortable night than she had done for years. The drainage kept up without interruption until about daylight, when the holes became filled with mucus, the flow ceased and the tube was expelled by the bladder. I reïntroduced it, and directed the nurse to examine the tube every half hour, and if it became clogged, to inject half an ounce of tepid water through it, and in this way keep it open. The morphia and belladonna suppository to be used every twelve hours, and oftener if vesical tenesmus came on.

For six weeks this tube was kept in the bladder constantly, and the patient remained in bed. Frequently it was expelled by the bladder and required to be replaced, and very often new tubing was substituted for the old. I found the shorter the portion of tubing in the bladder the longer it would be retained, and at last introduced only enough to secure the drainage; but the bladder evidently became more and more tolerant of the presence of the foreign body after the first week had passed. When from any cause the tube was reïntroduced, the plan already described was followed. Occasionally I succeeded in passing it as I would a soft gum catheter, without the aid of any instrument. Once or twice I used, to aid its passage through the urethra, a common grooved director. Afterwards,

I had made a large silver female catheter nearly straight, with a very large single opening at its vesical end, and taught the nurse to introduce it through this. I substituted also for the tapes strips of gum-elastic fastened to the tube, and attached them to the band around the abdomen. Occasionally phosphatic deposits were found on the tube, but this was corrected by the free use of citric acid in the shape of lemonade. During this period she slept well, was free from pain, her appetite increased, and her general health rapidly improved.

At the end of six weeks I attached the free end of the tube to a gum bag, which was fastened to the patient's thigh just above the knee. She was then permitted to get up and go about the house, and, after a few days, to walk about. She wore the tube for four months, going about and attending to many of her household duties, and enjoying a freedom from pain and a degree of comfort which she had not felt for years. At the end of this time I had some difficulty in persuading her to let me remove the tubing, so much afraid was she of a return of her former suffering. There was for some time after its removal complete incontinence of urine; but after a few days, especially after lying down, the bladder began gradually to retain some urine, and to expel it voluntarily in small quantities. The organ gradually recovered its former healthy power, and at this time, eight months since the drainage was begun, she can retain the urine about three hours, and void it without pain. Except the slight increased frequency of micturition, and this is growing less, the lady is well.—*Trans. Va. Med. Soc.*

Note.—In one of the worst cases of cystitis that I have ever seen (there being an effort at micturition every fifteen to twenty-five minutes, with pus almost always apparent in the urine, vesical tormina and tenesmus extreme, loss of rest, sleep, appetite and flesh) the patient was placed in bed and a flexible catheter introduced and tied in the usual way. The distal end of the catheter was inserted into the neck of a bottle. The relief was marvelous. The patient recovered entirely, and without a bad symptom. Being an old man, he never recovered entirely the muscular power necessary to micturate, and has most of the time to use a catheter in drawing off the urine, which he

can now retain for four or five hours. This patient was confined to his bed for a short time, and recovered his strength, flesh, appetite and ability to sleep, very rapidly. The only other treatment used was the frequent washing out of the bladder with detergent and anæsthetic solutions and the occasional addition to the wash of a little morphia. The trial of constant use of the catheter in this case was severe, as the patient was old, of intemperate habits, a sufferer for years, and at the time the treatment was commenced there was a discharge of much pus, some blood occasionally, with great prostration. The trial made conclusively demonstrated to my mind the fact, that by keeping the catheter always in the bladder, the bladder empty, and its ulcerated surfaces at rest, there is no risk whatever of inducing any other than the most transitory irritation; an irritation infinitely less than that produced by the constant contraction of the bladder in frequent and painful micturition. Some advocate the frequent introduction of the catheter in lieu of the treatment here advocated. Such practice is very profitable, but not judicious. I have known one charlatan who pretended that the introduction of the catheter was necessary daily at 10 A. M., the hour at which he was due at a medical college for didactic duty. I have known him when denounced and ridiculed for such quackery and rascality, to cease his apologies to the class (which for three weeks had received the false plea of an important case, etc.,) to meet the class with fidelity, and the patient (strange to say) to do equally well when the catheter was introduced before or after the mystic hour named. There can be no doubt but that the treatment advocated by Dr. McGuire, in his excellent paper, is the best one; easiest to both physician and patient.—E. S. G.

ART. IV.—OXYGEN GAS AS A REMEDY IN DISEASE. By JAS. L. CABELL, A. M., M. D., LL. D., President Virginia State Board of Health, Professor of Physiology and Surgery, University of Virginia.

Dear Sir,—In reply to your communication of the 18th instant, I have to state that my personal experience in the use of Oxygen Gas as a Remedy in Disease is limited to three cases. It would, perhaps, be admissible to say, to only two cases, since in one of the three, the patient, in whom convulsions and abortion supervened upon a very bad attack of pneumonia, was in *articulo mortis* when the attempt to administer the agent was first made. This was some years ago. I have, however, paid some attention to the recent literature of the subject, and as

the results of my partial experience correspond very closely with the deductions drawn from the more extended observations of others, they are not, I think, devoid of interest.

Omitting the case which I have just referred to as one in which the experiment was entirely nugatory, my first case was that of Mrs. —— to which you allude. In this case both lungs had been largely wasted by tubercular phthisis of several years' duration. During the previous three or four months the process of ulceration and suppuration had been extremely rapid, until the amount of breathing surface left was barely adequate to support life, and that only with extreme discomfort. A few inspirations of pure oxygen not only relieved the dyspnœa but reduced the frequency, while it increased the tone of the pulse, and revived the sinking spirits of the patient to an extent which can scarcely be exaggerated. At first these effects, following the inhalation of two or three gallons of the oxygen, would last for an hour or two, or even longer. After a few days it became necessary from the rapid progress of the disease to use the gas almost constantly, and when the inhalations were suspended by the necessity of sending the bag for a fresh supply, she would be exceedingly impatient and send a second messenger after the first. Nothing more was expected in this case than to effect a *euthanasia* by excluding asphyxia as a cause of death, and by maintaining the normal balance of the functions until the gradually failing power of the heart should finally give way under a painless asthenia. In this there was complete success. The patient continued to inhale the gas until within fifteen minutes of dissolution, holding the mouthpiece herself, and declaring that she experienced great comfort; the cause of death finally being *asthenia*, the pulse at the wrist having ceased sometime before the respiration.

The other case which has come under my notice is of more recent date. About ten days ago the principal of a boy's boarding school in another county came to me to get advice in regard to the treatment of a case of double pneumonia. He stated that one of his boys had died of this disease a few days before,

and now another was in an extremely critical state. I could not visit the patient, who was under the immediate care of his father, an intelligent and experienced physician, but I urged the gentleman who consulted me to telegraph at once to the manufacturer of oxygen gas for remedial purposes (W. E. Gladstone, 1291 Broadway, New York), for a cylinder capable of holding 200 gallons of oxygen compressed into a moderate bulk, and to use it according to directions. He was afraid that the boy would not live until the gas could be procured. In twenty-four hours, or thirty at most from the time of dispatching the telegram, the cylinder was received. I learn that in a few minutes the effect was magical in lessening the number of respirations, dissipating the sense of suffocation, diminishing other causes of discomfort and substituting a feeling of positive ease. Owing to a somewhat wasteful use of the gas, the supply was exhausted before an additional order was filled. During this interval the dyspnœa recurred with alarming urgency, but was again promptly relieved on a resumption of the inhalations, and in a few days the disabled lung tissue recovered its functional power and convalescence set in.

Such a result is in accordance with facts cited by Dr. Andrew H. Smith, of New York, in an excellent prize essay on "Oxygen Gas as a Remedy in Disease," which you will find in the "New York Medical Journal" for April, 1870.* He refers to a case of this disease reported by Dr. Golden in the "Lancet" for March 10, 1866, where there was great dyspnœa and which resolved in four days under the use of oxygen, and adds that he himself had seen a case of circumscribed pleuro-pneumonia, occurring in the course of chronic pyæmia, which was apparently aborted within thirty-six hours by the use of the gas. In general, the use of the gas is held to be contra-indicated in the the presence of acute inflammation, yet even if this rule be accepted as a well-established law, there can be no question that Dr. Smith is right in affirming that, "When respiration is se-

* Reprinted in "Richmond and Louisville Medical Journal" for November, 1870.—ED.

riously interfered with, the danger from this source outweighs all risk from any possible increase of the inflammation which the use of oxygen may occasion." I add that a careful analysis of Dr. Smith's experiments to determine the physiological action of oxygen, and of the results of its employment in the treatment of a great variety of inflammatory affections, has satisfied me that there is no risk at all. Dr. Smith's essay, of which a second edition with a few additional reports of cases has been published in pamphlet form, gives an excellent résumé of the literature of this subject, and after describing the modes of preparation and administration, considers the physiological action and the therapeutical uses of the gas.

To meet the wants of persons who can not supply themselves with the compressed gas, Dr. Smith has devised an apparatus for generating oxygen at the bed-side which costs about $25. In this apparatus the gas is generated by the decomposition of chlorate of potassa, and generally carries over some chlorine which is removed by a quantity of liquor potassæ purposely left in the wash-bottle and some sublimed chlorate of potassa, which escapes decomposition. No harm can result from inhaling the latter, according to the experience of Dr. Smith, who has repeatedly demonstrated the fact in his own person. But my colleague, Professor Mallet, informs me that there is yet another irritating agent whose presence in oxygen freshly prepared from chlorate of potassa precludes the safe use of the gas. This substance, which Dr. Mallet supposes to be some form of ozone, is, however, removed by allowing the gas to stand for half an hour or longer over water. In view of the existence of these irritating impurities in gas prepared from chlorate of potassa it will be better for persons favorably situated to procure the compressed gas from the large manufacturing establishments, where it is prepared from atmospheric air by the intervention of the manganate of soda.

The therapeutical applications of oxygen are arranged by Dr. Smith under three heads, as follows:

I.—In diseases involving defective respiration, as asthma,

pulmonary emphysema, croup, diphtheria, pneumonia, capillary bronchitis, dyspnœa from cardiac disease, poisoning with opium, charcoal gas, chloroform and chloral, cholera asphyxia, etc. He cites cases under each head, and with respect to croup, expresses a "firm conviction that oxygen will do in most cases all that could be done by tracheotomy."

II.—In diseases involving defective nutrition, as phthisis, in which disease, as in others in which nutrition is defective, the use of the gas, "*as a rule, favors assimilation and results in a gain of weight.*" He cites a number of cases which, in my judgment, suffice to encourage us in the systematic use of oxygen in the earlier stages of phthisis. Dr. Smith himself is too cautious to dogmatize, but says that "while not prepared to endorse the opinion of Birch, that with the use of oxygen the cure of consumption in its earlier stages should be the rule rather than the exception, he has no hesitation in saying that he has more confidence in it than in any or all other remedies." The other diseases included in this class are, dyspepsia, diabetes, albuminuria, rheumatism, and gout, uræmia, neuralgia, paralysis, epilepsy, fatty placenta, irregularities of menstruation.

III.—Applications of oxygen in surgery—to promote the healing of open wounds and ulcers, to prevent and palliate shock of severe surgical operations, and to sustain life in cases of chronic pyæmia, until the septic poison shall have been eliminated.

This exhibits quite a wide and extensive range of therapeutical application. I add that the author has been very careful in verifying his facts, and that he does not "ride a hobby." I have myself been under his treatment for a chronic affection of the larynx, and now take pleasure in bearing grateful testimony to his professional knowledge and practical skill.

It seems to me that your criticism founded on a passage quoted from Dr. Bayles' paper on Scarlatina in the "New York Medical Journal" for September, 1873, scarcely does justice either to Dr. B. or to the remedy (oxygen) which he recom-

mends. In scarlet fever, Dr. Bayles says: "It (oxygen) will tranquilize in one stage and energize in another. In a surprisingly short time I have, with the free use of oxygen, seen the pulse brought down from high levels to nearly the normal standard. In the same subject, *at another time* (the italics are mine and not Dr. B.'s), the pulse *small, thready, feeble, and slow*, would quickly be sent up to its normal range and volume." You object to this that it makes oxygen "blow hot and cold, at its own caprice, so that the practical physician must ever be at loss to know what its behavior will be, and consequently must resort to its use empirically." If this be so, then precisely the same charge may be brought against alcohol and most other stimulants. Precisely the same apparently paradoxical effects follow the use of alcohol administered in different conditions of the system. It reduces the frequency of the pulse in fevers and increases it in opposite states of the system, in both cases tending to restore the normal balance of the functions. This quality of rectifying "*by its direct action some deficient or too redundant natural action or tendency*," is of the very essence of a stimulant, as properly contra-distinguished from a narcotic, though the same agent may, in *different doses*, exhibit either quality. *Vide* Anstie on "Narcotics and Stimulants" *passim*, and especially his remarks on Oxygen, which he considers to be a perfect type of "*a stimulant of the first rank*," without the complication of narcotic properties in any dose, p. 153, and on the stimulant action of Alcohol, pp. 432–461.

Very truly yours,

J. L. CABELL.

University of Virginia, Feb. 23, 1874.

P. S.—Assuming that you will refer to Dr. Smith's Essay for detailed directions, I have said nothing about the mode of administering oxygen by inhalation. To provide, however, for the contingency of a failure on your part to get possession of that paper, I may add a few words as to the method of administration.

When indicated as a tonic to improve assimilation in chronic diseases, one or two gallons daily, given morning and evening, will usually suffice. In cases of urgent dyspnœa the permissible amount is practically unlimited. It should be repeated as often as is necessary to relieve the patient. Mrs. —— inhaled more than 100 gallons in a few hours, and suffered great distress when the inhalations were suspended. The gas is contained in a rubber bag and is conveyed to the patient's mouth by a flexible tube with a mouth-piece of hard rubber, ivory, glass, or wood. The patient inhales from the bag, and *during expiration, some one sitting by* compresses the flexible tube so as to prevent the expired air from passing into the bag. The rythm is easily caught, except when the respiratory movements are exceedingly rapid.—*Exchange.*

NOTE.—In a case of double pneumonia, in an old man, seen with Dr. James M. Keller, of this city, all of the symptoms and signs were unfavorable. Respiration shallow, and over 50 to the minute, great fatigue and prostration, loss of sleep great, and a pulse 120 to 130 per minute. After using oxygen gas twice in the space of a half hour, the respiration was reduced to 30 and then to 21 per minute. There was very, very great relief observed; the pulse was reduced in frequency, the patient rested and slept well; became easy and calm, and finally made a complete recovery.—E. S. G.

ANALYTICAL DEPARTMENT.

"Qui e nuce nucleum esse vult, frangit nucem."—PLAUTUS.

Gelseminum.—C. D. Hodge, M. D., of Arkansas, contributes his experience with gelseminum to the "Southern Medical Record" (Feb. 1874), as follows:

Soon after the febrifuge virtues of gelseminum were first accidentally discovered by a Mississippi planter, it was put forth as a nostrum in the form of a branded tincture under the cognomen of "Speed's Tonic"; and seeing among some of my patrons who had purchased and were using the medicine, that

it *did* possess very remarkable properties in controlling fever, by a little exertion I was fortunate enough to learn from one of the agents the plant, and as the vine grew abundantly around me, I lost no time in preparing a tincture, and instituting a series of trials, to get at its proper medical properties. * * * My experience fully warrants me in endorsing all that has been claimed by Dr. Anderson, of North Carolina, and Professor Murray, for this agent as an antiperiodic. * * *

Again, the value of gelseminum is not fully appreciated in the treatment of neuralgias—especially those of an intermittent character. In these cases it may be given in appropriate quantities in combination with quinine, bromide of potassium, and muriate of ammonia. With the latter, we think highly of it in the treatment of either acute or chronic sciatica. In apoplexy, where there is arterial excitement, with congestion, but no *rupture* of the vessels, the gelseminum shows itself an agent of signal potency. * * * In a case of tedious labor, where a rigid os uteri or an unyielding perineum offers the obstacle, we have only to apply an exhausted glass tumbler to the sacral region—wait fifteen or twenty minutes, and let the patient have a commanding dose of the tincture—and complete relaxation is sure to ensue very soon. In the treatment of irritable bladder, very favorable mention has already been made of this agent in some of the back numbers of the "Record." It is also claimed as one of the "*very best remedies*" combined with opium, in dysentery. We can urge it as second to few, if any remedy, when associated with proper auxiliaries, in controlling recent gonorrhœa and acute ophthalmic affections. We will here casually say, owing to its peculiar physiological tendency to the organ, we believe the gelseminum will at no distant day take a prominent stand as an eye remedy.

The dose may range from three to twenty-five drops, according to urgency, and other pointing of indications. But we think it the better plan, particularly when given at short intervals, to use small doses, say four or five drops, and when its characteristic effects, muscular heaviness of the lids, perverted

or double vision, etc., begin to be manifested, lessen the dose or prolong the spaces, or *suspend*, if effects are very marked. * * We would say to those of our brethren who are disposed to give this article a trial, not to rely upon the *fluid extracts*, or any other preparation, except the *freshly tinctured green root*, the inner bark of the root at that. We are satisfied a non-observance of this particular has impaired the confidence of many. We think the root-bark should be consigned to the alcohol within six hours after being gathered. It must be prepared in September or later; it is valueless in summer. Bruised roots, ℥vj., diluted alcohol, ℥xvj.; filter.

Detection of Calculus.—Napier proposes ("Med. Times and Gaz.," Dec. 6, 1873,) a new sound for detecting calculus. "The calculus detector is precisely similar in form to ordinary sounds. It is composed of steel up to the commencement of the curve, where it is reduced in diameter, and a coating of pure lead is cast around the smaller part, of sufficient thickness to render the surface perfectly smooth and even along the entire length. The leaden extremity is then polished as highly as possible with leather, and rendered highly sensitive to the slightest contact with any rough or hard substance, of which it would be found to bear visible trace."

This addition to sounds may be valuable for cases where it is difficult to get satisfactory evidence of the presence of stone; it is known that great difficulty is sometimes experienced with the ordinary sound, when the calculus is very large, so as to completely fill the bladder. [See Practical Lithotomy and Lithotrity, by Sir H. Thompson, 1871, p. 110.]

NOTE.—It has been suggested by some one, whose name is not now remembered, that by placing a piece of India rubber tubing on the distal end of the sound, and placing the free end of the tubing in the external meatus auditorius, that the power and facility of detecting a urinary calculus is wonderfully increased. A very valuable suggestion, for the operator enjoys all of the great advantages of auscultation.—E. S. G.

New Means of Dilation in Stricture of the Urethra.—It

simply consists in the employment of a column of liquid about twenty metres high, established by means of a funnel, and containing about a pound and a half of water (boiled at 25° or or 27° C.), and suspended above the patient's bed. An India-rubber tube (about two metres long), and provided with a cock in the middle of its length (so as to moderate or suspend the current of water), and having at its end a small glass pipe like an ordinary syringe, which is to be introduced into the meatus urinarius, connects the apparatus with the penis. The glass end being introduced, the cock is more or less opened at will, and slight pressure is exerted on the glands to prevent the water from running outside. The water in the funnel is then forced down by its own weight, and runs down drop by drop, dilating the stricture without pain, and through its local anti-phlogistic action, rendering the urethra pervious to sounds and bougies. The patient can himself apply the apparatus three or four times a day, and when it is removed, the surgeon has only to make use of his sounds or bougies.—*Mouvement Med.*

NOTE.—If a catheter be passed to the site of stricture and firmly held there, and if the nozzle of any syringe be introduced into the catheter, a free flow of urine will occur as soon as a vacuüm is created in the syringe by drawing backwards the piston of the instrument. If the stricture be spasmodic only in character, or if the inodular deposit be not too great, the catheter may be dexterously forced forwards into the bladder as soon as the urine commences to flow.—E. S. G.

Petiteau and Isard on Iodoform as a Topical Remedy.—Dr. Courteaux ("Annales de Dermatologie et de Syphilographie," vol. v. 1873–4) gives a summary notice of two recent works by these gentlemen on the use of iodoform. Petiteau's conclusions, which, Dr. Courteaux says, agree with his own and those of several surgeons at the Midi Hospital of Paris, are as follows:

1. Iodoform is locally anæsthetic.
2. When dusted on ulcerating surfaces, it causes them to cicatrize rapidly.
3. It is most useful in small atonic wounds, or such as tend

to creep or enlarge; soft chancres, suppurating buboes; syphilitic, varicose, scrofulous and cancerous ulcers.

4. It is the surest remedy to procure prompt cicatrization of syphilitic ulcers of all kinds.

5. It may be applied as an ointment, or as a solution in glycerin and alcohol, and in these forms is preferable to the powder when there is abundant suppuration.

6. It should be always accompanied in syphilitic affections by internal treatment.

Petiteau attributes its good effects to the simplicity of the dressing, to its antiseptic power, and to the absorbent property it possesses as a powder, and to its giving off iodine freely.

Isard, while agreeing with many of the conclusions of Petiteau, maintains that phagedæna is not controlled by iodoform. —*London Med. Record.*

Surgery of the Aboriginees.—The following occurs in an address on surgery, before the Canadian Medical Association, by Dr. W. H. Hingston:

The aboriginees had their surgery—simple but effective—to which their usurpers were sometimes forced to have recourse. Contused wounds and bruises were treated by cold douches from springs and running streams; and suppurating wounds with the bark of the mucilaginous slippery elm (Ulmus flava), and basswood (Silia), and the resinous bark of the tamarac (Larix americana)—all excellent emollient and stimulant cataplasms; and ulcers were stimulated to granulation by the inner wood and berry of the juniper (genus juniperus). They reduced dislocations by main force, and also, it would appear, by a rotary method, which seems somewhat like that introduced to the Profession by that distinguished American surgeon, Nathan Smith. Fractures (which rarely occurred among them) were carefully set, and splints of cedar or broom, ingeniously padded by the squaws with leaves or grass, were bound upon the limb with withes of the young birch (genus Batula); and amputations were performed at the joints with knives of flint

or jasper (and in some places of copper), polished and keen as steel*—and spouting vessels were seared, and hæmorrhage arrested with stones heated to redness. These practices are still continued among the tribes far removed in the interior.—*Canada Med. and Sur. Jour.*

Pathognomonic Sign of Pertussis.—The practitioner may be sometimes consulted on a case of hooping-cough without having the opportunity of witnessing a paroxysm. In such a case M. Bouchut recommends him to examine the frænum linguæ, which he will always find the seat of a small ulcer in children the subjects of pertussis, or who are on the point of becoming so.—*Revue Medico-Photographique.*

NOTE.—I have had three children suffering severely with this disease, but this mythic ulcer was nowhere to be seen.—E. S. G.

CLINICAL RECORDS.

"Ex principiis, nascitur probabilitas: ex factis, vero veritas."

ART. I.—INTERESTING CASES IN OPHTHALMIC PRACTICE. By JULIAN J. CHISOLM, M. D., Professor of Eye and Ear Diseases in the University of Maryland, and Surgeon in Charge to the Baltimore Eye and Ear Institute.

During the past year 1582 cases, suffering from diseases of the eye, sought treatment at the Baltimore Eye and Ear Institute, some of which presented features worthy of note.

Among the 253 cases of affection of the eyelids, the following are of clinical interest:

CASE I.—*A Keloid Growth of Twenty-seven Years, Involving the Entire Lower Lid and Two-thirds of the Upper Lid of the Left Eye — Growth Removed and the Two Lids Manufactured from the Skin of the Forehead and Cheek.*—J. R., aged

* The preparation of these instruments was oftentimes the work of years.

sixty, a tailor, in good health, twenty years since, whilst in the navy, perceived a small warty lump growing under the lower lid of the left eye. It gave no pain, and increased so slowly that for fourteen years it caused no annoyance, although in the meantime it had involved a considerable surface of the lower lid in a broad warty, elevated tumor. At this period an attempt was made for its removal, which was only partially successful.

He first came under my observation in 1869, at which time he was much disfigured by a large red wattle or nodular growth, which extended over a large portion of each lid, and was continuous with the skin around the inner canthus of the left eye. It encroached upon the caruncula and converted this body into a thick shelf of flesh, under which the eye would revolve when rotated inward. By an operation, this fleshy shelf was removed, so as to allow the eye a wider range. The lid-tumor was not interfered with.

In 1870 he again sought treatment. On this occasion I removed a large portion of the tumor from the nose and inner canthus. In time the wound cicatrized, with decided improvement in his appearance.

In December, 1872, he again presented himself for surgical treatment. He was urgent to have the tumor entirely removed, as it interfered with his procuring work. After careful study I determined to dissect off the entire growth, and by a blepharo-plastic operation replace the extensive destruction of lids which the removal of the disease necessitated. At this time the tumor was one-fourth of an inch thick, with precipitous walls. A band of keloid growth or wattle half an inch wide extended from the temporal end of the lower lid to the ridge of the nose, where it met a similar band which had covered the inner two-thirds of the upper lid. The entire side of the nose corresponding to the inner canthus, for the space of an inch in depth, was covered by this thick fleshy wattle, which overhung the nasal median line. The surrounding skin was perfectly healthy, and the tumor had throughout its entire outer periphery

a well-defined outline. The entire lower lid was involved, even to encroachment upon its conjunctival lining. A similar condition existed for the inner two-thirds of the upper lid; the outer third was healthy.

The operation was divided into two stages. An attempt was made first to replace the two-thirds of the upper lid and the lost skin covering the nose. If successful, it was designed at some future time to remove the lower lid and replace it also by skin from the neighboring cheek. The operation was commenced by making in the healthy skin at the edge of the growth a vertical incision along the bridge of the nose, and sufficiently extensive to cover the vertical diameter of the tumor. From this wound extended outwards a horizontal incision running directly beneath the left eye-brow to the extent of three-fourths of the upper lid, then turning at right angles downwards through the free border of the upper lid. From the lower extremity of the vertical nasal incision a second horizontal incision passed outwards through the healthy skin under the growth upon the lower left lid, until it reached the level of the inner canthus, when it was made to pass upwards and end in the neighborhood of the caruncula. All the keloid growth included within these five incisions was dissected away, leaving clean surfaces.

As is usual in removing keloid growths, the hæmorrhage from many small vessels was very free. By the use of continued pressure the surface was finally made dry, and the plastic operation was commenced. The vertical incision made in the median line of the nose was extended upwards for one and a half inches, until it reached a deep, natural groove running across the forehead. A second vertical incision parallel with the first extended from the nasal termination of the right superciliary ridge upwards to reach the groove already referred to. These two incisions enclosed a tongue of skin three-fourths of an inch wide and one and a half inches long. A bold incision three inches long was now made across the forehead in the transverse groove, extending equally on either side of the skin-flap. This defined the flap and allowed it to be dissected up to

the full extent of the vertical incision, leaving it attached, however, to the right side of the face by a footstalk as broad as the space between the bridge of the nose and the inner canthus of the right eye. The right angular vessel ramified in this flap and insured its thorough nutrition. The loose flap was now twisted upon its pedicle and brought over to the left side, when it was found to cover nearly the entire raw surface from which the tumor had been removed. In adjusting the flap by twisting it so as to cover the nose, its upper edge became the lower edge when in position, and was united to the infra-orbital margin of the wound and the bridge of the nose. The right border of the flap in its new position looked to the left, and was free. To this free border the remnant of the upper lid was to be attached, but between the two there was still a considerable gap to be filled up. This deficiency was overcome by making an incision three-fourths of an inch long directly outwards from the external canthus, from the end of which temporal incision a second one passed upwards half an inch in length. The remnant of the upper lid with this flap of skin included between these two incisions, when dissected upwards, permitted the lid to glide across the orbital surface and to be sutured without tension to the free border of the frontal flap. In liberating the lid I had incised only the mucous membrane, so that the elevator muscle remained intact. To fill up the large opening in the forehead, from which the nasal flap had been taken, it was only necessary to dissect up the skin over each eye as far out as the temples, and up to the transverse incision which had previously been made across the forehead. By traction the loose flaps were made to meet in the median line, and thereby closed the entire gap. Sutures were freely used to keep the parts in position, and union by first intention was secured.

After six weeks, the improvement in the appearance of the eye became so marked, the upper lid having acquired a good deal of elevation power, that the patient was urgent to have the diseased lower lid replaced equally by healthy tissue. There was still a belt of elevated keloid growth half an inch wide

involving the entire length of the lower lid, including the ciliary edge, from which all the lashes had long since disappeared. By making a vertical incision downwards from each canthus, and joining these by a transverse cut in the healthy skin below the lower margin of the growth, the entire disease was removed. This left a very extended excavation. To fill this large raw space, the vertical incision made at the external canthus was extended obliquely downwards in the direction of the angle of the mouth for the distance of nearly two inches. From the temple a second vertical incision was made parallel with the first, which enclosed a tongue of skin three-fourths of an inch wide by nearly two inches in length. The two vertical incisions were joined by a transverse one on a line a little above the angle of the mouth, and this flap was dissected up with its broad footstalk continuous with the skin of the temple. The flap, when turned at right angles with its former position, was found to fill up perfectly the raw excavation from which the growth had been removed. It was secured in its proper position by several points of silk sutures. When the skin of the cheek was loosened on each side of the vertical incisions, the two cut edges were easily brought together without tension, so as to efface the space from which the lower lid had been manufactured.

The condition of the patient eight months after the operation was most satisfactory. The temporarily thickened prominence of the flaps has quite disappeared, also the red color of the scars, so that he can bear a rigid inspection without exposing the fact that two plastic operations had been performed for the removal of a most disfiguring disease. The remnant of the upper lid with lashes attached, from constant stretching, seems to have expanded so as to cover well the eye. It has also regained its natural movements as in winking. The lower lid is, of course, without lashes, resembles the condition of a large number of ophthalmic patients who had suffered from chronic ciliary blepharitis. There is, however, an improvement over this class of patients, as there is no red border to the lid, nor

is there any tendency to ectropion. This lid looks well. The upper lid also looks natural, with the exception of absence of hairs from the outer and inner canthus edges. The nasal extremity of the lower lid would exhibit a few hairs formerly belonging to the beard near the angle of the mouth were they not carefully plucked out as fast as they show themselves.

The case is of great interest and rarity, when viewed as a double blepharo-plastic operation. The patching out of the surface over the lachrymal sac is not an uncommon operation in ophthalmic surgery. The manufacture of even half of a lid has often been effected at the hands of specialists. Even an entire lid may have been successfully made from contiguous tissues; but very seldom do we find in the annals of surgery a destruction so complete, necessitating so extensive a removal of the entire lower lid and two-thirds of the upper lid, so satisfactorily concealed by plastic operations.

CASE II.—*Pharaphimosis of the Eyelids.*—Mrs. S., aged fifty-seven, discovered by accident, eight years since, that there was no sight in the right eye. Painlessly the light had gone out of it without her knowledge. Not long after this disagreeable discovery, she experienced a fullness of the eyeball, which her friends in time recognized as a prominence of the eye on the right side. For eight long years she has been watching a gradual painless protrusion of the eyeball from the development of a growth in the orbital cavity. The lids have yielded to the gradually forming exophthalmos without at any time resisting the expansion by inflammatory attacks. By the thinning of the upper lid, the tissues have become so translucent that the colored iris is plainly seen through the lid, imparting to it a dark circumscribed discoloration. This might be mistaken for the black sloughing of tissue did it not change position with the movements of the eyeball. The eyeball itself has undergone no change in appearance, only in position. Its cornea is clear, with bright iris and black pupil. The lifting of it out of its bed has been so gradual as in no wise to disturb the nutrition of its structures, which retain, therefore,

their normal peculiarities. The muscles which move the eye had become elongated, so as to accommodate themselves to the new order of things, and although motions are in a measure restricted, the ball could still be moved in all directions by the recti muscles. These general movements indicated a central origin for the growth. This fact, when taken in connection with the early loss of sight—long prior to any protrusion of the eyeball—led to the inference that the growth had developed in or around the sheath of the optic nerve.

Beyond the very ugly deformity of exophthalmos, she has had but one source of suffering. The lids had retained all of their functions with the levator palpebræ in full play. As long as she keeps guard over these lid-movements, no annoyance is experienced. Her only period of suffering is at the moment of awaking from sleep. Should she at such times suddenly open her eyes, giving the levator palpebræ full sway, the lids glide quickly over the entire spherical eyeball, clasping the back of the eye with a spasmodic grip. The lids then encircle the optic nerve in their embrace and cause frightful suffering as long as the pressure is continued. When this paraphimosis has been excited, the entire eyeball, in an isolated state, is actually standing out, in a frightfully independent manner, on the surface of the face. This singular abnormal condition can be easily understood, when it is remembered that the socket, having been made over-full by the developing tumor, the eye has been pushed before it until the present position of the optic nerve entrance is actually in advance of the normal position of the anterior face of the cornea. When this sudden spasm of the lids comes on, the first impulse which experience dictates is to call for help. Some one always at hand, for she is on this occasion never left alone, immediately lifts the lid over the eye, relieving the ball from pressure, and this movement secures an immediate cessation of the suffering.

Under chloroform, the eyeball and the orbital tumor were removed. In a short time convalescence was established and the patient was permanently relieved of these frequent attacks of

dreadful suffering. The tumor, which filled the orbit, had developed within the sheath of the optic nerve. All trace of nerve tissue had disappeared. The thickened and expanded sheath formed the envelope of the large tumor.

CASE III.—*Action of Electricity in Removing a Lid-tumor.*—Mrs. W. F., aged sixty, has had for the past year two indurated knots, one on either side of the root of the nose at the inner canthi. They are the sequel of lupus, which had ulcerated the entire nasal surface. The nose had been for some time healed, with a thin glazed, whitish scar, except at the upper margin, where a cicatricial ridge was surmounted at either end by the tumors referred to. The tumor at the right canthus was the size of a large buckshot; the one at the left canthus being twice this size. They gave no pain, but were hard, ugly prominences, which she was very anxious to have removed. In the past twelve months no change had taken place in them. With the usual dread of being operated upon by the knife, I was induced, in this case, to substitute for the cutting a continuous current of electricity. The small tumor was first made the subject of experiment. By means of a small spongeeophore, well wetted, the electricity from six cells of a continuous battery was concentrated upon the tumor for ten minutes, the other pole being placed upon the cheek. The current caused severe burning, but was patiently borne. The surface of the tumor was made very red by the application, and a sore feeling was experienced for twenty-four hours. In her case it was not convenient to apply the electricity oftener than every five days. At the end of one month the tumor had altogether disappeared by absorption. In the meantime, the tumor on the opposite side of the nose had undergone no change. Electricity, in constant current, was then very successfully used for its removal also.

CASE IV.—*Orbital Tumor Occurring in a Case of Cancer Saturation.*—Mrs. C., aged fifty-six, of South Carolina, sought advice at the Baltimore Eye and Ear Institute for a protrusion of the left eyeball, which was not only very disfiguring, but

had recently given much pain. Eight months since her attention had been first attracted to this eye by double vision, which became from week to week more marked. When this discovery was made there was no protrusion of the eyeball. An inspection of the eye exhibited a slight tendency to internal strabismus, with paresis of the external rectus muscle. Sight in the eye was good, with normal appearances under the ophthalmoscope. In the course of time a fullness exhibited itself in the region of the lachrymal gland, which had caused the tilting of the eye over to the nasal side, and explained the increasing internal squint. When in the progress of the disease the strabismus had become marked, then the eyeball commenced to protrude, on account of the further enlargement in the lachrymal gland region.

The extirpation of the eye with the orbital tumor was deemed necessary, because of the severe suffering, and also to remove the disfigurement. To give the patient the best prospect for a long interval of comfort, the entire orbital contents were dissected away by using finger dissection between the orbital walls and the periosteum. When the entire cavity had been emptied, a prominent knot, the size of a pea, was found projecting from the roof of the orbit. It was recognized as a distinct malignant nucleus. It was so intimately incorporated with the frontal bone, that no attempt was made to remove it, in the presence of the fact that cancerous tumors already existed in other parts of the body. From this small germ the orbital cavity was refilled by a cancerous growth in two months.

Besides the orbital tumor, the patient has a typical knobbed swelling, fist-size, in the left breast, well enlarged glands in the arm-pit. Three large tumors are prominent in the abdominal walls over the region of the recti muscles; three upon the back over the upper sacral region; two on the shoulder-blade; one on the tongue, and a very painful ulcerated tumor beneath the tongue. Several swellings protrude, with their angry, red, nodulated surfaces, from the scalp. In all, there are twenty-two cancerous tumors in various parts of the body, any one of

which would be considered a typical specimen of malignancy. All of these tumors have made their appearance within eighteen months. None have given pain but the eye-tumor and the ulcerated one beneath the tongue. From this last tumor, as a centre, intense pains dart toward the ear, occasioning in paroxysms the most frightful ear-ache. As her general health was good, the operation upon the eye was desired for its cosmetic effect. The cancerous developments scattered over the surface of the trunk were thoroughly recognized prior to the enucleation of the orbital tumor.

CASE V.—*Dermic Tumors of the Conjunctiva.*—In the short space of three months three cases of this rare congenital affection applied at the Baltimore Eye and Ear Institute for surgical treatment.

The first patient was J. A., aged twenty-three, from North Carolina. Projecting from the right corneal edge, temporal side, was a whitish yellow, dry tumor, from the centre of which grew a small bunch of short hair. The growth, the size of a small pea, was adherent to the eyeball, half of its base upon the outer segment of the cornea, and the other half resting upon the sclerotic. Its base was firmly planted upon these structures, and although the projecting surface could be wrinkled, the base could not be moved. The tumor, as a small elevated body, had been detected upon the eye soon after his birth, and had developed with the growth of the visual organ. It was sharply defined in outline, with decided contrast in color to the surrounding conjunctiva, was dry, painless, and had in no wise affected the vision, which was quite as acute in this eye as in the perfect one. By transfixing the very base of the tumor by means of a broad cataract knife, the entire mass was perfectly removed. The surface of the wound healed without trouble, leaving the usual smooth, white cicatrix. Under the microscope a section of the tumor exhibited the true dermic structure, with sebaceous follicles, hair-bulbs, etc.

A second case was that of J. L., of Virginia, aged thirteen. This tumor similated the case first described very closely, ex-

cept in size, it being nearly twice as large as the former growth. Like the preceding, it was also located on the outer and front portion of the eyeball, being planted upon the cornea and sclerotic. It was of the same yellowish white color; dry, when compared with the surrounding conjunctiva, with a few scattering hairs projecting from its prominent surface. As is the case with all such growths, it had been detected at birth, and had grown pari passu with the eyeball. Vision remained good in the eye. The same mode of procedure was adopted for the removal of the tumor as in the preceding case.

The third case, that of Miss C. P., of Maryland, aged twenty, presented herself at the Institute on the same day as the case just described. In this patient the conjunctiva at the outer canthus from the corneal edge to the angle of the lid was replaced by the peculiar yellowish white, thick, dry skin, garnished with the usual pilous appendages. From its extent it had, in a measure, interfered with the full development of the palpebral fissure, so that the eye, in which there was perfect vision, seemed to be smaller than the one on the opposite side. At no time had the tumor caused discomfort. The object in seeking surgical treatment was in the hope that by the removal of the ugly white growth, the lids could be made to separate more widely, so as to allow the eye to appear of full size. As the removal of the tumor with the extensive absence of conjunctiva from the outer canthus, and no covering for the eyeball, would have caused still further contraction of the palpebral fissure in the healing of the wound, I advised her against the operation. The deformity would have been necessarily greater after the surgical procedure, which would have led to serious disappointment.

CASE VI.—*An Insect—A Tick—Attached to the Eyeball.*—Among the cases of foreign bodies in the eye which presented themselves for treatment at the Institute during the past year, one deserves notice from the character of the intruding substance. Miss F., aged seventeen, has complained much of her left eye for the past twenty-four hours. Whilst at her country

home, enjoying a ramble in the fields, a pain came on suddenly in the eye, which caused the apprehension of the presence of a foreign body. During the night the eye continued very painful, and, when in the morning it was found much inflamed, she sought professional advice in the city. In examining the eye, I discovered a small, dark, round body sticking to the conjunctiva just below the corneal border. It was dislodged only after the application of considerable force. Upon inspection with a magnifying glass, I found the foreign body to be a tick insect. It had buried its head in the thickness of the conjunctival membrane, and yielded very reluctantly its grasp when force was applied.

Under affections of the iris several cases of interest came under observation during the past year.

CASE VII.—*Suppurative Iritis Coming on Six Months after a Cataract Extraction with Large Iridectomy—Cured by a Second Iridectomy whilst the Anterior Chamber was half full of Pus—Good Sight finally Restored.*—Mrs. F., of Pennsylvania, aged twenty-five, has always been very near-sighted. For the past twelve months her vision had been growing more and more defective, until useful vision had been lost. She then sought relief at the Institute. Upon ophthalmoscopic examination with dilated pupils, I discovered in each eye nuclear cataracts, more advanced, however, in the left eye. Under chloroform the left eye was iridectomized with upper corneal linear section. The opening gave easy exit to the opaque lens. Without accident or suffering the cataract operation restored perfect vision on account of the extreme near-sightedness, even carefully selected glasses had not given her perfect distant vision. After the cataract operation, with convex glasses she possessed better distant vision than she had ever had, with near vision perfect.

For six months after the operation she enjoyed all the privileges which perfect sight gave her, the eye then became inflamed, and was treated by her family physician. Amidst much suffering she lost her sight. After three weeks of inflamma-

tion in the eye she was brought to the Institute with the anterior chamber half full of pus. In spite of the free administration of opiates her sufferings were frightful. Having by experience found that iridectomy often relieved the acute inflammation as if by magic, I determined to give her the benefit of the operation. Under chloroform I opened the cornea from its lower border and took away a large segment of the iris. This section, with the former iridectomy upwards, divided the iris into two lateral portions. The purulent contents of the anterior chamber escaped through the corneal opening. The operation relieved the pain promptly, and without an anodyne she obtained that night the first refreshing sleep that she had had for three weeks. Inflammation commenced to subside from the moment of operation, and convalescence was slowly established. Two days after the operation she felt well enough to return to her home.

In the course of two months she again visited the Institute for further surgical treatment. The cornea was now clear with no injection of the conjunctiva. The iris had regained its bluish color. There was through the centre of the iris a vertical split irregularly contracted and backed by inflammatory deposits, through which only light enough could worm its way as to enable her to detect the outlines of large objects. The sequel showed that this accidental formation alone interfered with good light. A double needle operation, by tearing open the pupilary split, made a clear space, through which excellent vision was at once secured.

CASE VIII.—*Sight Restored to an Eye which had been Perforated Antero-posteriorly by a Shot.*—It is customary to believe that when an eye has been accidentally perforated by a foreign body, with vision so far lost that only a perception of light is retained, the eye is necessarily doomed to destruction. It is good surgery to extirpate such an eye, to avoid future trouble. Exceptions to this good rule are at times met with.

In the following case one eye was shot out and the other shot through with loss of vision. Sight was, however, restored to the

eye perforated by an operation four months after the accident.

N. B., of Virginia, aged fifteen, was accidentally shot in the face, at short range, by a musket loaded with small bird-shot. He received the charge on the right side of the head and face, and was supposed to be mortally wounded. I saw him six weeks after the accident. He had in the interval regained sufficient strength to walk about, and had been brought to the city of Baltimore for treatment. When I examined him, I found that the scalp covering the right side of the head had sloughed away, leaving exposed and necrosed the extensive surface of the right parietal and frontal bones; granulations at the edge of the suppurating wound had already lifted the edges of the dead external tablet, which was peeling off from the deeper living layer. The greatest extent of this dead surface was still firmly adherent to the diploe. The eye was shrunken, the cornea having sloughed away. There were many shot under the skin of the lids. Whether there were any shot lying in the cavity of this shrunken ball, I had no means of determining. This eye gave him no pain, nor had he in fact complained of any suffering from the moment of the accident. He kept the left eye carefully shielded from the light. He could not permit the lid to be raised. Under chloroform a careful examination of the left eye was made. A large white cicatrix covered the left eye, central portion of the cornea, to the inner surface of which the iris was everywhere adherent. A broad peripheral zone of clear cornea surrounded this opaque centre. There was no anterior chamber, and the iris was lying face to face with the inner surface of the cornea. He retained in this eye only a perception of light, and it was extremely irritable to the slightest exposure. Atropia instilled in strong solution produced no change in the appearance of the iris. There was still much injection of the conjunctiva and the deeper tissues. The shot had evidently traversed the cornea and perforated the lens; where it had gone for its final resting-place could not be determined.

As this eye, in its very crippled condition, was his only chance for sight, I made an artificial pupil, and a few days

afterwards returned him to his home, with instructions to take tonics freely and use daily an atropia solution to the eye. In six weeks he returned to me without vision. The eye had become strong, as far as exposure to light was concerned, but with it he could only detect shadows. The artificial pupil had altogether closed up in the general cicatrization, and had left a white scar beneath its site in the iris. All injection had now disappeared from the eye.

Under chloroform I again performed an iridectomy, and, through a large corneal opening from towards the inner canthus, tried to tear away a large portion of the iris. The extended and firm central adhesion of the iris to the cornea prevented the new pupil from reaching the centre of the eye; I had, therefore, to make amends for the deficient length of the pupil by detaching the eye more widely from the ciliary border. After a few days watching, the patient was again sent home, with instructions to return to the Institute in one month. During his absence evidences of returning sight were of daily occurrence, and at the end of the specified time the patient could see to walk alone, and was in many ways exhibiting an agreeable independence. When tested with cataract glasses he could tell the hour and make out good-sized print.

The results in this case were very gratifying as well as very instructive. The scarred cornea, the adherent iris, and the absorbed lens clearly pointed to the perforation of the eyeball by the shot; and yet, after four months loss of sight, useful vision was restored. The pupil was too lateral to permit a satisfactory ophthalmoscopic examination of the fundus oculi, and therefore the continued course of the shot could not be traced.

Of the 139 persons who, suffering from cataract, sought relief during the past year at the Baltimore Eye and Ear Institute, three or four cases only are worthy of special note. The operation performed in nearly every case of senile cataract was a modified linear extraction extending across the upper portion of the cornea and accompanied by an iridectomy. In cases where the cataractory lens was of full size, and there was fear

that the edges of the corneal incision would have to submit to too much pressure in the delivery of the opaque lens, the corneal opening was enlarged by making, with the curved scissors, a vertical incision at each extremity of the transverse cut. These vertical snips of the scissors followed the descending curve of the corneal border. In every case in which the scissors were freely used for the easy delivery of large lenses, perfect results were obtained. In one or two cases in which the lens escaped through the corneal opening, only after considerable pressure, the haziness of the upper part of the cornea ensued. In the hands of skilled specialists, cataract extraction has become the most brilliant and the most successful operation in surgery, as by very far the greater number of persons operated upon have excellent sight restored to them.

CASE IX.—*Curious Form of Lenticular Opacity.*—S. H. C., aged thirty-five, has been near-sighted for many years, which condition could not be corrected by carefully adjusted glasses. Notwithstanding their use his sight remained weak and deficient in acuteness. Two years since he detected in the vision of the left eye a decided blur, which has remained stationary up to the present time. Upon any surface looked at there is a dark spot constantly projected, and when this eye is exposed to strong light, vision in it becomes very dim.

When examined with the ophthalmoscope, with pupil dilated by atropia, a very curious appearance in the lens was exhibited. In its central axis was seen a dark spot, about the size of the pupil in ordinary light. The opaque spot resembles very closely a shell with edges very sharply scolloped, in decided contrast to the bulk of the lens, which is perfectly normal in transparency. The complete isolation of the opacity and its clear definition indicated a long presence. I reëxamined the patient after many months' interval, but could detect no change in the size of the shell-like opacity.

CASE X.—W. B. P., aged 72, of Virginia, came to the Baltimore Eye and Ear Institute to be operated upon for cataract, which had been slowly progressing in each eye, in accordance

with the usual development of lenticular opacities in persons of his age. Sulphuric ether administered to him, for the purpose of extracting the cataract, produced decided hysteria. It exhibited itself in paroxysms of length, but was accompanied by complete insensibility to pain. Amidst his hilarity, the operation was performed. These phenomena continued for at least one hour after the completion of the operation. No inflammatory complications occurred in his case, and in accordance with the rule, perfect sight was regained. His case is only mentioned to record a curious item in his life's history. He was of high social position, and had divided his active life between the country and the city, and yet, in his diet, he had not tasted of fowl for sixty-five years. He related the following incident: As a child, he exhibited the peculiarity of never eating poultry of any kind, and when there was no other meat on the table, he preferred going without meat altogether. Every effort was made by his parents to correct this unnatural taste, but without effect. In trying to overcome the antipathy, the piece of fowl placed in his mouth would seemingly swell upon chewing until it became too large for his buccal cavity. With the act of mastication, his imagination would conceive a growth of feathers over the surface of the bolus, which made it impossible to swallow it. The presence of this feathered ball in his mouth was so very disagreeable to him that he was compelled to eject it. He made many futile efforts to overcome his repugnance, but without success. So that, since his early boyhood, for sixty-five years, he has never partaken of any meat upon which feathers had ever grown.

CASE XI.—In connection with the above, I will mention a second case of emotional peculiarity which was also operated upon during the past year for cataract extraction. This gentleman, aged eighty, is still, now that sight has been perfectly restored, an active contributor to a widely-circulating weekly. Although of nervous temperament, he bore the operation of cataract-extraction without chloroform, and without a movement or a murmur. In fact, as well as it were possible to do.

In his early life the sight of blood, in however small quantity, caused very uncomfortable feelings, which he could not suppress. To such an extent were his emotions affected by anything pertaining to this instinctive dread, that on one occasion, during his collegiate life, whilst preparing a recitation on a description of the circulation of the blood flowing out and from the heart through the larger vessels, the idea alone of the flowing of blood caused him to fall from his chair in a swoon, in which condition he was found on the floor by his room-mate.

ORIGINAL CORRESPONDENCE.

"Sit mihi Fas scribere audita."

Empyema of Left Lung.

Kewanna, Fulton Co., Ind., May 12, 1874.

E. S. Gaillard, M. D.:

On the 30th day of July, 1864, I was sent for in haste to visit Lieut. H. H. Carter, of Company A, Twenty-sixth Regiment Indiana Volunteer Infantry, whose family and parents were residents of this part of the county, and who, on his return home from New Orleans on the last of March same year, had a very severe attack of inflammation of the left lung and pleura, from exposure on an over-crowded boat. On his arrival at Indianapolis, on the first day of April, he sent for medical aid; and, being a stranger, was "taken in." He was treated by two physicians for disease of the heart. They at that time overlooking the acute disease of lung and pleura. He remained under their treatment for several weeks, until his disease assumed a chronic form. He was then brought home, a distance of over one hundred miles, to his father's house, and supposing his case incurable, concluded to die without taking any more medicine. When I first saw him he had an exacerbation of fever every evening; pulse 120; respiration laborious; anx-

ious and livid appearance of countenance; propped up in bed; solidification of the left lung; breathing hurried and difficult; yet possessing energy and an anxious desire to recover and return to his regiment. He had no disease of the heart; the extremities were cold, and at times an œdematous condition of the extremities, and no appetite. I left him sulph. morphia ¼ grain, bicarb. soda 2 grains, to quiet his pain, and a tablespoonful of port wine to be taken every three hours. On the following day I visited him again. His general condition was about the same. By auscultation I detected the heart resting three inches to the right from its proper position, diaphragm pressed down, and on percussion, dullness throughout the entire left side, which was distended, and all the intercostal spaces filled up. I did not hesitate to at once resort to an operation to relieve the patient, who was suffering severe pain, the action of the heart being so violent as to shake the bed upon which he was lying. I introduced between the fifth and sixth ribs a sharp-pointed bistoury until it reached the contents of the sac, which was followed by a copious discharge of sero-purulent matter. Over a gallon was taken from the left side at this operation, which immediately reduced the heart's action to its normal beat; and instead of the patient becoming weaker, his pulse became slower and respiration natural, the heart returning to its normal position, and an entire cessation of pain. The discharge continued until the fourth day of August, when the opening closed.

On the 5th instant I met Dr. Robbins, of Rochester, Ind., in consultation. At that time an abscess was forming between the third and fourth ribs, lower down and much nearer the surface than at first, occasioned from the position our patient had to occupy in bed. We determined on a second operation to relieve the same painful symptoms as before. An abscess-lancet was then introduced, and at least *three gallons of pure pus were discharged.* For fear the opening would again close, I introduced a tent, and it continued to discharge from *one-half to one pint a day for three months.*

Lieutenant Carter, in November of that year, went to Indianapolis, and was sent from there to Cincinnati, Ohio, where he obtained his discharge, myself accompanying him to dress his side, which was still discharging. He was put upon the following treatment, after the second operation, as an alterative: Iodide Potassium, as a tonic; Quinine, Iron, Port Wine, and Ale. Under this treatment he continued to improve steadily, until the following spring.

During the summer of 1865 he labored on his farm, and in the autumn following he sold out, purchased a farm in Southern Kansas, where he has resided ever since, in the enjoyment of perfect health.

Remarks.—The character of this case is very interesting, first, from his being treated for weeks for heart disease, when that organ was only sympathizing from disease of the pleura and lung. Second, it is absolutely essential to open the abscess early and keep it open, that the matter may discharge freely without absorbing, as it is much better to rid the system of so large a collection of pus in this manner than to risk nature to effect a cure. Supporting the system by an active tonic treatment, and a good appetite, which was the case, after the second operation, with Lieutenant Carter.

Respectfully, W. T. CLELLAND, M. D.

CLINTON, LA., March, 1874.

Dr. E. S. Gaillard:

* * * * * * *

As I am writing, I feel inclined to report a case which all physicians have heard and read of, but few of us have seen. Within the corporate limits of this town lives a very worthy and nice old lady, about sixty-five years of age. Last summer one of her daughters-in-law died, leaving an infant two months old. To care for the motherless child greatly distressed her. Having very little of this world's goods, not even a milch cow, she applied to her own breast, and in a few days she was astonished to find herself "giving," as she

said, "plenty of milk for the baby." The child is now living, and seems as healthy as most children. To see the little fellow climbing upon the knee of an aged woman whose silvery locks and shaking hand denote a mark for the death angel to aim his unerring shafts at, is, to me, a most wonderful but pleasing and interesting sight.

Yours, etc., W. W. DUNN, M. D.

LOUISVILLE, April, 1874.

Dr. E. S. Gaillard:

Dear Sir,—Will you do me the great kindness to publish that portion of the letter I enclose which relates to my article entitled "Igneous Agency in the Production of Disease," published in the March number of your Journal?

Before and after beginning the writing of that essay, I examined such books as, it seems to me, ought to have informed me whether or not subterranean heat had ever been regarded as an agent in the production of diseases styled, "Epidemic," and could learn nothing of the matter. The letter of my accomplished friend, Dr. Heustis, shows, it will be seen, that I did not pursue my inquiries sufficiently far.

But I must claim (and I believe there will be no disposition to deny such a claim) that the theory I have "spun," unassisted by authority, is some improvement on the opinions contained in the quotations made from Webster by Dr. H. Had a plausible theory been built on the old supposition or superstition that comets cause epidemics, no higher claim to originality could have been urged than in the present instance.

However, the most important idea of my paper is, not that suggested, it appears, by Van Helmont or Von Swieten, but another, viz., *that inorganic poisons* (brought in reach of man by "Igneous Agency") *are the true "materies morbi" of widespread pestilence.*

This opinion also may be a very old one, I know nothing positively to the contrary; but the whole subject seems to have been dropped from the books and teaching of late years.

With an apology for troubling you with such a long preface to Dr. Heustis' letter, I am,

Truly yours,

DUFF CHILD, M. D.

MOBILE, ALA., April 29, 1874.

Dr. Duff Child, Louisville, Ky.:

My Dear Doctor,—Your letter of the 25th is just received. The old book I showed —— is "Webster on Pestilence," "A brief History of Epidemic and Pestilential Diseases; with the Principal Phenomena of the Physical World which precede and accompany them, and observations deduced from the facts stated." By Noah Webster, 1799.

It shows an immense amount of research, and traces back the history of pestilence to the most remote periods of time; beginning with the five books of Moses and bringing it up to his own day.

You will find that Van Helmont says that "the pest is not sent down from Heaven, but that popular plagues do draw their first occasional matter from an earthquake." Von Swieten supposes it not impossible that "exhalations in earthquakes may augment or lessen the deleterious quality of the air in pestilence."

Further on Webster says that "the most acute observers of the operations of nature have suggested the probability that pestilential epidemics are caused by some occult qualities in the air or by vapor from the internal paths of the earth; as earthquakes, eruptions of volcanoes, appearance of comets, violent tempests, unusual seasons."

The book is full of accounts of earthquakes, etc., occurring at the time of great pestilence. See pages 36 and 37 to begin with. "In the year 315 of Rome and B. C. 439, according to Paulus Diaconus, tremendous earthquakes shook Italy for a whole year," and the earthquakes here mentioned probably ushered in the long and formidable calamity which was to follow, and were probably contemporary with the beginning of

the plague. "Siccitas eo anno plurimum laboratur est, nec cœlestes modo defuerunt aquæ, sed terra quoque, ingenito humore egeus, vix ad perennis subfecit amnes." "The violent action of internal heat or electricity distinguished this pestilential period, and was evidenced by tremendous and universal earthquakes."

But there is so much on the subject in the book, I will have to refer you to it *passim.* * * * * * * *

Very truly yours,

J. F. Heustis, M. D.

Austin, Miss., April 14, 1874.

Professor Gaillard:

Dear Sir,—Dr. W. H. Triplett's very interesting résumé of the known facts concerning the malady, termed by the great Trousseau "Adenia," and by others, "Hodgkin's Disease," calls to mind a case that, by the courtesy of Dr. Griffiths, I in company with other students of the Louisville Medical College, saw at the U. S. Marine Hospital, at Louisville, in the winter of 1872.

Having lost my notes, I write entirely from memory, and may err in some unimportant details.

A German laborer, aged thirty-five, light hair, florid complexion, and robust habit, had been employed to aid in excavating a tunnel on one of the railroad lines leading into the city. Becoming very warm and fatigued, he sat down to rest, and fell asleep, and, when awakened by his comrades, complained of pain in the orbital region, which was followed by several rigors.

Now commenced the development of the disease. Small glandular tumors showed themselves around the neck and in front of his ears, until the whole sub-maxillary, cervical and axillary groups were so enlarged as to endanger his life by pressing upon the bronchi and trachea.

During this whole period, extending over several months, his general health had been extremely good, and there were no evidences of anæmia. Iodine and other remedies were adminis-

tered, with no good results, and the glandular tumor being so intimately connected to many important muscles, utterly precluding the idea of extirpating them, with the scalpel, led Dr. Griffiths to try the *seton*, thus hoping to cause inflammation and suppuration of the offending organ.

This line of practice was determined upon Sunday afternoon, and the setons were to be introduced Monday morning, but in the intervening time the man ran away, and was supposed to have gone to Cincinnati, never having been seen again by the writer. If this was a case of "Adenia" or "Hodgkin's Disease," its cause was undoubtedly the same that would have induced pneumonitis, pleuritis, or some kindred affection in others similarly exposed. Its effects were confined entirely to the sympathetic glands, *without interfering with the functions.* Witness his uninterrupted good health.

It resisted all attempts to either check or abort it, and its tendency was to speedy and certain death by asphyxia.

Very respectfully,

P. E. CHAPMAN, M. D.

AUSTIN, TEXAS, April, 1874.

Prof. E. S. Gaillard, M. D.:

Dear Sir,—Permit me, through the columns of your valuable Journal, to call attention to the recovery of a case of trismus neonatorum, which came under my care, in a child aged seven days. Treated as follows: ℞.—Hyd. Chlo. Mitis., grs. viij.; ft. chart, No. ij. Sig. To be given four hours apart.

℞.—Potassii Bromidi, ʒiij.;
Aquæ Cinnamoni, ʒss.;
Aquæ Puræ, ʒj. M.

Sig. A teaspoonful every half hour, as long as there are any signs of spasms; the body to be well rubbed over with olive oil.

After four doses of the bromide of potash mixture had been given, there being no signs of a return of the spasms, it was

ordered given, one, two, three, and four hours apart, until it was finally discontinued on the fourth day. A scattered pustular eruption over face and body followed.

Dr. East, of this city, has treated several upon almost the same plan with success, he using onion poultices to the bowels and larger doses of potash.

Yours, very truly, RICHARD BIBB, M. D.

LITTLE ROCK, ARK., April, 1874.

Dr. Gaillard:

Dear Sir,—The case reported by myself which appeared in the April No. of your Journal, "Dislocated Liver Mistaken for an Ovarian Tumor," made a rapid recovery. The report was only intended as introductory. A more complete history, diagrams, etc., are now being prepared for publication by the attending physician. The liver still occupies the abnormal position as described. Yours, etc.,

JOHN R. DALE, M. D.

A SUGGESTION TO BENEFIT BOTH PATIENT AND PHYSICIAN.

NASHVILLE, TENN., May, 1874.

Prof. E. S. Gaillard:

Sir,—It has occurred to me the following plan might be mutually advantageous to the community and the Profession: Let one practitioner in our cities be known as the *night* doctor, whose special office hours shall be from 12 o'clock (midnight) to 4 A. M. This would best become an unmarried man. In consideration of his self-denial, let him be undisturbed between 8 P. M. and midnight; and from 4 to 8 A. M. during the day, that is, from 8 A. M. to 8 P. M. no difference from the general practitioner is required. Like most propositions, objections may be made to this one, but carried out, it would certainly secure prompt attention to the suffering; nor would it necessarily interfere with the family physician, who can not always be had, but who, under these circumstances, could resume

charge of the case after the emergency calling for the night visit. Thus may we have provided under all circumstances immediate relief to the sick, and secure that repose so often denied physicians; and this, too, without additional cost or labor to either party, but an actual gain to both.

Truly yours,

PAUL F. EVE, M. D.,

PROCEEDINGS OF SOCIETIES.

"Etsi non prosunt singula, juncta juvant."

TEXAS STATE MEDICAL ASSOCIATION—OFFICIAL REPORT.

FIRST DAY.

The medical fraternity of the State of Texas assembled in convention, in the city of Dallas, at Odd Fellows' Hall, Tuesday, April 7, 1874, at 9 o'clock A. M. There were fully one hundred delegates present, embracing a body of professional culture and eminence equal to any North or South. The morning session was principally devoted to organization, the following officers, who were elected last year, holding over: Dr. Stuart, of Houston, President; Dr. Brown, of Waco, Vice-President; Dr. Young, Secretary, and Dr. Larendon, Treasurer.

The Association being called to order, by a unanimous vote Rev. Mr. Davenport, of St. Matthew's Episcopal Church, was elected Chaplain.

Dr. Jones, of Dallas, welcomed his professional brethren in an exceedingly handsome and graceful reception speech, which was responded to by Dr. Ashbel Smith, of Harris county, in an eloquent and beautiful manner.

The meeting was opened for business by prayer by the Rev. Dr. Davenport.

Dr. S. O. Young next read the minutes of the last meeting, which were adopted.

Dr. Jones moved that all regular physicians be invited to take seats with the Association. Carried.

Dr. G. M. Ross moved that the clause of the by-laws regarding the election to membership of physicians be suspended. Carried.

Dr. Ross moved that all the societies and applicants for membership adopting the constitution and by-laws of the State Association be elected. Carried.

The following societies were then admitted: Burleson County Medical Association, Dallas City Medical Association, Grayson County Medical Association, Hill County Medical Association, Harrison County Medical Association, Johnson County Medical Association, Jefferson City Medical Association, Lamar County Medical Association, Travis County Medical Association, Washington County Medical Association, Waco City Medical Association.

Petition from Williamson County (Georgetown) Medical Association received and ordered returned with instructions that the first article of the by-laws, section 1, conflicted with the by-laws and constitution of the Texas State Association. Requested to change article relating to admission to membership, to-wit: Physicians of one year's standing, one course of lectures, etc., and the society would be enrolled as members of the Texas State Medical Association.

On motion of Dr. Hudspeth, the Association adjourned to meet at 2 P. M.

AFTERNOON SESSION.

FIELD'S OPERA-HOUSE, 2 P. M.

The first business of the afternoon session, after prayer by the Chaplain, was the signing of the constitution of the Association by new members; after which an able paper on yellow fever was read by Dr. J. M. Ross, of Brenham. The subject was also discussed by Dr. Heard, of Galveston, and others.

Dr. Heard made some very interesting remarks on yellow fever, which, on motion of Dr. Hudspeth, he was requested to

reduce to writing and hand to Publishing Committee. Carried.

Dr. Matchett was also requested to furnish an article on the same subject to the Publishing Committee.

Dr. Young then offered the following preamble and resolution, which were carried:

Whereas, The records of the army show that the medical staff officers of that organization are not on an equality with the other staff departments as regards rank, pay and allowance, whereby unjust discriminations are made against the medical corps; and,

Whereas, We believe the duties pertaining to the medical department of the army are as important in all matters touching its efficiency, health and general welfare, and as honorable as those belonging to any other staff department; therefore, be it

Resolved, That the State Medical Society of Texas take this occasion to represent to the senators and members of Congress from this State, the desire of the medical profession at large, that all unjust discriminations against the medical staff of the army be removed, and that the members thereof be placed on an equal footing with the other staff corps of the army, and medical staff of the navy; and to this end the members of this Society would respectfully ask their honorable representatives in Congress to use their utmost influence in any legislation which may come before them in their action.

Dr. Ryan, of Caldwell, offered the following resolution:

Resolved, That the President appoint a committee of three to prepare a law regulating the sale of drugs, patent medicines, etc. Carried.

Dr. Robertson asked to be excused from service on the committee to whom was referred the resolution instructing said committee to report what legislation is necessary to protect the profession and the people from charlatanism and impostors in the practice of medicine. Upon the suggestion of Dr. Hall, of Bryan, Dr. Robertson was excused and Dr. Hall placed on said committee.

On motion, the Body adjourned to meet at 9 o'clock to-morrow morning.

SECOND DAY.

ODD FELLOWS' HALL, April 8, 1874.

The Association met at Odd Fellows' Hall at 9 o'clock A. M., and was called to order by Dr. Stuart, the President. Prayer by Rev. Mr. Davenport.

Dr. T. J. Heard, of Galveston, exhibited a suppository for the cure of uterine engorgements, and explained its application and use in a clear and scientific manner.

Dr. Ross, of Brenham, moved that Dr. Heard present the character of the suppository shown the Association, and his remarks upon it, in writing, its employment, etc. Adopted.

Reports from various committees were called.

Committee on record cases discharged.

Committee on Epidemics and Climatology; report by D. W. A. East. Said report included articles on dengue, influenza, and rubeola, as prevalent in 1873 and the early part of 1874, in the city and vicinity of Austin, Texas. Also, a report on dengue, and a table of meteorological observations for 1873, furnished by Dr. J. M. Litten, of Austin. Also, a report of some cases of trichinosis, by Dr. Hadra, of Austin.

Dr. East was requested to ask Dr. Hadra for a full report of his cases with treatment, for presentation at the next annual meeting. Report received and referred to the Committee on Publication.

Table of temperature was presented by Dr. Heard. Referred to Committee on Publication.

On motion of Dr. Ross, two reports, one from Dr. East, on indigenous resources, were called for. Further time granted.

Committee on Surgery called. Report not ready.

Committee on Obituaries. Report not ready.

The President announced unfinished business in order. There being none, new business was then in order.

Dr. Matchett, of Brenham, asked the privilege of reading an essay on yellow fever. Made special order for to-morrow at 11 o'clock.

Dr. Ross, of Brenham, offered the following resolution:

Resolved, That the rules be suspended, and that we go into an election of officers for the ensuing year. Adopted.

The balloting for the election of officers determined the following gentlemen to be the choice of the Association for the ensuing year: For President, Dr. A. G. Clopton, of Jefferson;

First Vice-President, Dr. L. D. Wooten, of Paris; Second Vice-President, Dr. M. H. Oliver, of Dallas; Recording Secretary, Dr. J. E, Lay, of Hallettsville; Treasurer, Dr. J. Larendon, of Houston.

On motion, the Association adjourned to meet at Field's Opera-House, at 2 o'clock.

AFTERNOON SESSION.

Met pursuant to adjournment. Owing to some misunderstanding regarding the occupancy of Field's Opera-House, where the annual address and essay were to be delivered according to previous notice, the doors of the Christian Church were thrown open by the Association, and after prayer by Rev. Mr. Davenport, Dr. Stuart, the retiring President, delivered his annual address, which was a composition of decided merit. He then introduced to the Association and audience the newly-elected President, Dr. A. G. Clopton, of Jefferson, Texas.

Dr. Clopton, in a scholarly and accomplished manner, acknowledged the honor conferred, and assumed the presidency of the Association.

The Essayist, Dr. J. N. Sears, of Waco, then read his essay. It was an able argument and full of wholesome advice to the Profession.

On motion, the Association then adjourned to meet at 9 o'clock to-morrow.

THIRD DAY.

HALL KNIGHTS OF PYTHIAS, April 9, 1874.

Convention met pursuant to adjournment. Prayer by the Chaplain, Rev. Mr. Davenport.

Communication from Dr. A. R. Kilpatrick, of Navasota, Grimes county, regretting his inability to attend. The Doctor sends a report of rain-fall in Grimes county for each month since January, 1873, and the total annual rain-fall since 1866. This statement was furnished him by Judge Gwyn Morrison, of Grimes county. Also a rough draft of the dissection of the

band and livers of the Siamese Twins. The umbilicus is on the band, none on either abdomen, therein resembling Adam and Eve more than any other of their descendants. The ensiform cartilages joined across the band; so do the livers and the peritoneum, many blood vessels and nerves. Eng's liver is on the left side, so as to unite with Chang's. The Doctor also warns the Association, that there are strong evidences of a spread of cholera this year, and suggests that the people should be instructed in preparing to prevent it, if possible.

The President then announced that new business was in order.

Dr. Ashbel Smith then introduced the following resolution:

Resolved, That a committee of three be appointed to memorialize the Texas Legislature, requesting that they make an appropriation to the Galveston Medical College. Adopted.

Dr. Wooten read a paper on an operation for multilocular ovarian tumor.

Moved by Dr. Rayfield that the paper be referred to the Publishing Committee. Carried.

Dr. Brown read a report regulating the practice of medicine, and an act to amend and regulate the practice of medicine in the State of Texas.

By request, Dr. Ashbel Smith read the law applying to the same, as created by the last session of the Texas Medical Association, and followed the reading with a trenchant attack upon mountebanks and imposters, who were found in the Profession. Referring to the advertisements seen in the various newspapers gazetting the sovereign catholicans of quack doctors, and the laudatory notices by the editors of the papers upon the same, the Doctor regretted to observe that some of the most influential journals in the country admitted these advertisements, and referred to one in the Galveston "News," at the same time conceding the high journalistic character of that paper.

At the conclusion of Dr. Smith's remarks, Dr. Sears moved that the report, as read by Dr. Brown, be accepted and referred to Dr. Wallace, of Austin, to have the Legislature of the State act upon the same.

Dr. H. W. Brown, chairman of the Committee on Legislation, reported as follows:

Mr. President—The committee appointed to examine the act to regulate the practice of medicine in Texas, etc., to report if any changes in or amendments of the same are desirable, beg to report that they have examined the said act, and present the following amendments to be recommended to the Legislature of Texas:

An act to amend an act to regulate the practice of medicine.

Be it enacted by the Legislature of the State of Texas, That section 1, of this act, entitled an act to regulate the practice of medicine, be amended by striking out all of this section after the words "doctor of medicine."

Section 2. Insert in section two, after seventh line of printed act, "from some medical institution recognized by the American Medical Association."

Section 5 shall be amended by striking out all between the words "into the county treasury" and "females."

Section 6 shall be amended so as to read as follows: Any person who has been regularly engaged in the practice of medicine in this State as a regular business, but who may not be a graduate of some medical college recognized by the American Medical Association, may make affidavit to the same, supported by the oath of two witnesses, which affidavit shall entitle such person to be examined in anatomy and materia medica, by the County Board of Medical Examiners, and such affidavit with the certificate of proficiency granted by said board, shall be registered the same as if they were a diploma, and entitle such person to practice in like manner as regular graduates.

Section 7. Any person who is not a citizen of Texas, entitled to vote, and who shall come into the State and advertise to perform surgical operations, or cure diseases, shall, before entering upon such practice, pay into the county treasury the same tax as is paid by persons exhibiting a circus performance or menagerie, and for violating this act, parties guilty of the same

shall be subject to the same penalties, to be collected in the same way as for circus and menagerie exhibitions.

Section 8. The provisions of this act shall not apply to the unorganized counties of this State, so long as they remain unorganized.

And your committee also recommend that the Legislature be memorialized to pass a law requiring a permanent record of all marriages, births and deaths, occurring in each county, to be kept in the records of the District Court of said county. Report received. Adopted by special request of Dr. Heard.

A report on the practice of medicine was read by Dr. Ryan. On motion, the report was received.

Dr. Ross then offered the following preamble and resolution; which were adopted:

Whereas, This Association needs a medium for our communications and literature, and there is a medical journal published at Galveston, and we are informed the proprietor designs to put it on a more permanent basis; therefore, be it

Resolved, That if the present proprietor will make arrangements to secure the services of a managing assistant editor, who may or shall be nominated by this Body, who shall have the right to select his own assistant editors from the various parts of the State, we pledge ourselves to the support of the same by making it the means of our intercommunication, and by becoming cash subscribers at once.

The President then called for the reading of Dr. Matchett's paper on yellow fever, the hour having arrived as arranged yesterday. Dr. Matchett presented an able paper on the subject, and, at its conclusion, Dr. Dowell moved that the remainder of the morning session be confined to the discussion of the subject. Carried.

AFTERNOON SESSION.

The meeting was called to order at 2 o'clock.

Dr. Ross read the caption of a report on public hygiene, made to the Washington County Medical Association. Referred to a committee.

Dr. Robinson then offered the following preamble and resolutions:

Whereas, The season is near at which we may look for a visitation of that terrible enemy of our race, yellow fever, in some or many localities of our State; and, whereas, while there exists among our Profession a difference of opinion as to its character, causes, propagation, and treatment, all agree in the efficiency of a proper system of hygiene, in preventing a visitation of this malady to any locality; be it therefore

Resolved, That this Association recommend to all cities, towns, and thickly populated neighborhoods, the early and prompt establishment and rigid enforcement of a proper system of sanitary laws and regulations in their respective localities.

Resolved, That we recommend as the proper step in starting this proper system, the appointment of boards of health, to be composed in the main of intelligent, competent practicing physicians for each locality.

Resolved, That the proper system of hygiene and sanitary laws, to be effective, must be put in force at an early period in the spring, and in fact should be enforced throughout all seasons of the year.

Resolved, We give it as the unanimous opinion of this Association, that any and all localities, be they cities, towns, or neighborhoods, with such a system of hygiene and sanitary regulations properly and fairly enforced, if it does not prevent the visitation of yellow fever entirely, will have such a controlling influence over its malignity as to rob it of most of its fatality and terrors.

Resolved, That the press of the State be requested to publish these resolutions.

The resolutions were supported by Dr. Robinson in a lengthy and forcible speech. Resolutions carried.

Dr. Brown moved that Dr. Palmer, owing to his venerable age and protracted experience with the treatment of yellow fever, be invited to address the Association. Carried.

Dr. Palmer then took the floor, and in a speech of about an hour, gave a most lucid and interesting exposition of the nature of that dreaded disease. He did not believe the epidemics at Columbus and Calvert yellow fever; entered fully in the discussion of the subject; said he saw no difficulty in distinguishing the disease. He followed the incubative symptoms, and said that many of them applied to many of the malarial fevers. He was not astonished at the appearance of black vomit, if such it was.

After the address of Dr. Palmer, Dr. Dowell read an able article on the subject, in which he portrayed the disease in all

its horrors; related all the cases he saw in Calvert, traced them through the different stages, gave the treatment. Says the Calvert disease was the yellow fever without the least doubt. He took up Dr. Palmer's points, and discussed them in a clear and forcible manner.

FOURTH DAY.

HALL OF KNIGHTS OF PYTHIAS, April 10, '74.

Convention met pursuant to adjournment at 9 o'clock A. M. President Clopton in the chair. Prayer by the Chaplain, Rev. Mr. Davenport.

The reading of the minutes of the last meeting were dispensed with.

Motion of Dr. Harrison to investigate causes of disease in Denison. Carried.

Dr. Sears, of Waco, offered the following resolution:

Resolved, That a special committee of three be appointed to investigate the use and abuse of gossypium, its action on the gravid uterus; also its properties as an emmenagogue, an abortive, and an oxytoxic.

The President appointed the following committee: Drs. Sears, Cochrane, and Harrison.

Dr. Pope, of Marshall, moved that Dr. Rayfield, of Jefferson, be requested to furnish the chairman of the Publishing Committee with his article on an operation for lithotomy, successfully performed by the latter gentleman. Dr. Pope urged that the operation, as performed by Dr. Rayfield, was a most interesting one, and its description important to the Profession. Motion carried.

Dr. Matchett moved that the members of the Texas Medical Association be instructed to use their efforts to have the American Medical Association meet in Houston next year. Carried.

A motion by Dr. Harrison that a committee be appointed to institute steps for the creation of a library for the use of the Texas Medical Association carried.

Dr. Stuart moved that additional names be added to Committee on Yellow Fever Epidemics of last year.

Amended by Dr. Hudspeth, that a committee be appointed for each place — Denison, Marshall, Calvert, and Columbus. Amendment carried, and the following gentlemen appointed on the committee: Drs. Harrison, Jamison, and Achison.

Delegates to American Medical Association: Drs. T. J. Heard, Galveston; L. S. Rayfield, Jefferson; J. C. McGregor, Waco; J. H. Pope, Marshall; M. A. Taylor, Austin; E. J. Beall, Fort Worth; R. H. Jones, Dallas; D. R. Wallace, Austin; F. M. Hall, Bryan; C. H. Leeds, Columbia; J. M. Morrison, Hearne; H. W. Rrown, Waco; J. M. Fort, Paris; R. W. Allen, Dallas.

Committee to memorialize the Legislature for an appropriation to Galveston Medical College: Chairman, Dr. Greenville Dowell, Galveston; Dr. D. R. Wallace, Austin; Dr. W. A. East, Austin.

The Secretary stated that he would notify each member of the various committees, so that there can be no excuse at the next annual meeting.

Dr. O. S. Young offered a resolution that the officers would continue in office until the close of the session of the following year, in order that the business of the Association may be facilitated.

It was moved to refer the same to Committee on Constitution and By-laws. Carried.

Motion of Dr. Read to refer Dr. Fields' report on a case of imperforate anus, with complete absence of the rectum (sectum entering into the upper and posterior wall of the vagina), to Publication Committee. Carried.

Dr. Hudspeth moved that the resolution of Dr. Harrison be taken up. Carried.

Dr. Harrison then read his resolutions, supplementing the same with some remarks.

Dr. Childers objected to the adoption of Dr. Harrison's resolution. It was, however, adopted.

Dr. Stuart moved that the article of Dr. Dunn, on strabismus, be read. Carried.

Dr. Dunn was called upon to read the same.

Dr. Matchett then moved a vote of thanks to Dr. Dunn. Carried.

Dr. Matchett offered a resolution that the Association adopt the code of ethics of the American Medical Association. Adopted.

He also exhibited some plants and explained their medicinal properties. His report was received.

On motion of Dr. Pope, Dr. Rayfield's paper on lithrotomy was referred to the Committee on Publication.

On motion of Dr. Swindells, the Association was then resolved into a Committee of the Whole, and Dr. Oliver, of Dallas, called to the chair.

The Association then took up the discussion of yellow fever, in which Drs. Dowell, Palmer, Harrison, Pope, and others, participated.

Before the discussion Dr. Harrison read a report on yellow fever in Columbus, and Dr. Pope on the same in Marshall, both of which were finished dissertations.

Both gentlemen, as they read, gave full explanations of the character of the disease and treatment, stating some peculiarities not often met with in previous epidemics.

Dr. Harrison exhibited several specimens of black vomit.

On motion of Dr. Jones, both reports were referred to the Committee on Publication.

Pending a motion of final adjournment, Dr. Clopton resumed the chair and addressed the Association in a few farewell sentiments, which, in their entirety, constituted a rhetorical gem of rare beauty and polish.

Tabular Statement of Papers Received.—Dr. Greenville Dowell, on yellow fever; Dr. R. H. Harrison, on yellow fever; Dr. John H. Pope, on yellow fever; Dr. J. F. Matchett, on yellow fever; Dr. J. M. Ross, on yellow fever; Dr. J. J. Burroughs, on cerebro-spinal meningitis; Dr. J. T. Norris, on public hygiene; Dr. Alex. W. Achison, on health of Denison; Dr. W. A. East, on dengue, measles, and influenza; Dr. J. M. Lit-

ten, on dengue; Dr. J. Cummings, on eclampsia; Dr. B. Hadra, on eclampsia; Dr. J. T. Norris, on hydrophobia; Dr. T. D. Wooten, on multilocular ovarian tumor; Dr. Greenville Dowell, on radical cure for hernia: Dr. John S. Dunn, on strabismus; Dr. T. D. Wooten, on ætheramous or calcareous degeneration of the aorta; Dr. J. T. Field, on imperforate anus and sectum; Dr. H. Wilkinson, on meteorological report for port of Galveston; Dr. T. J. Heard, on meteorological report of Shreveport, La., for June, July, August, and September, 1873; also for New Orleans, La., same months and year; also for Mobile, Ala., same months and year; also for Memphis, Tenn., same months and year. Dr. Ryan, on sanitary regulations; Dr. W. P. Fleming, essay on the pathology of fevers.

About one hundred and sixty members were present during the term.

The Association then adjourned to meet in Austin on the first Tuesday in April, 1875.

A. G. Clopton, M. D., President.

W. A. East, Secretary.

Missouri State Medical Association.

Society met with a large number present. A communication was received from Dr. S. S. Todd, President, regretting that sickness detained him at home.

The Committee on Permanent Organization reported as follows, which was adopted: President, W. O. Torrey, of Hannibal; Vice-Presidents, T. J. Montgomery, Sedalia; J. S. B. Alleyne, St. Louis; F. M. Johnson, Platte City; William C. Webb, Dover; W. L. Shankland, Recording Secretary; E. W. Shauffler, Kansas City; Corresponding Secretary, A. S. Cloud, Chillicothe; Treasurer, John T. Hogden, St. Louis; Member of the Nominating Committee of the American Medical Association, M. A. Pallen, St. Louis.

Dr. Torrey returned thanks to the Association for the honor conferred on him.

Dr. J. A. G. Brown delivered the welcoming address to the Association.

Dr. Rumbold, of St. Louis, then proceeded to read a paper on the "Local Affections of the Nose," in which he illustrated the treatment with diagrams, etc.

Dr. T. J. Montgomery, of Sedalia, read a paper on "Medical Education," which was well received and applauded.

The most of the evening hour was spent in discussing the report of Dr. Brown on medical jurisprudence and the paper of Dr. Montgomery.

On motion of Dr. Pallen, the reports were adopted.

Dr. Cloud, of Chillicothe, said he had often heard of Sedalia and her beautiful daughters, and he desired that the Committee of Arrangements, if it was compatible, invite Dr. Hogden, of St. Louis, to deliver an address to-night, and that the ladies and citizens of Sedalia be invited to attend.

On motion, adjourned to 7:30 P. M.

NIGHT SESSION.

Association met at 7:30 P. M.

It was moved by Dr. Cloud, of Chillicothe, that the place for the next meeting of the Association be now selected. Jefferson City was selected.

A report from Dr. Joseph Ganghofer, of St. Louis, was read; and, on motion of Dr. Pallen, of St. Louis, was laid on the table.

Dr. Porter, of ——, read an elaborate paper on the treatment of Syphilis, which was very able and interesting. It was referred to the Committee on Publication.

Dr. Trader, of Sedalia, next read a paper on the "Progress of Surgery," which was well received and applauded.

It was, on motion, referred to the Committee on Publication.

Dr. Dickinson, offered a series of resolutions regarding the establishment of a hospital for the treatment of the poor blind of the State.

Dr. Trader moved an amendment that the resolution embrace a hospital for all diseases.

It was moved by Dr. Broome that the resolution be referred to a committee of five. Carried.

The Chair appointed Drs. Broome, Trader, Porter, Dimmit, and Winstone.

Dr. T. J. Montgomery moved that Dr. J. B. Jones be the accredited delegate from the Missouri State Medical Association to the North Carolina State Medical Association. Carried.

Adjourned until to-morrow morning at 9 o'clock.

SECOND DAY—MORNING SESSION.

Association met at 9 o'clock—roll call by the Secretary.

The Secretary read the minutes of yesterday's proceedings, which were approved.

The committee on scientific papers made the following report:

Dr. McAlister, of Columbia, "Uterine Catarrh."

Dr. Wilson, of Weston, "Progress of Surgery."

Dr. Glasgow, of St. Louis, "Medical uses of Electricity."

Dr. McAlister proceeded to read his paper on "Uterine Catarrh, which, on motion, was received.

A long discussion ensued, taken part in by Drs. Gregory, Edgar, Schauffler, Lester, and Winston.

The paper was referred to the Committee on Publication.

Dr. Trader moved that Dr. Wilson be requested to read his report on surgery.

The special committee, to which was referred Dr. Dickinson's resolution on the establishment of a blind hospital, reported.

There were two minority reports and one majority report read by the Chairman; whereupon, on motion, the whole matter was laid upon the table.

Dr. J. W. Trader offered the following resolution:

Resolved, That the Committee on Publication be instructed to ascertain at as early a day as possible the probable cost of the publication of the Transactions of the Association, and in case there be not funds sufficient in the treasury to pay the expenses attending thereto, to be authorized to notify all authors having papers before the committee for publication, and that they also furnish said authors the approximate deficit pro rata. Adopted.

Dr. Edgar, of St. Louis, offered the following resolution touching emotional insanity:

Resolved, That the State should provide an asylum for its criminal insane separate from either of the State asylumns, and that such an asylum should receive those in whose defence the plea of insanity is made as a mitigation of punishment for crime.

Dr. Edgar supported his resolution in a speech to the Association, saying that something was demanded in this direction.

Dr. Edgar's resolution will be acted upon at the next annual meeting.

Adjourned to 1:30 P. M.

AFTERNOON SESSION.

Association met 1:30.

The President appointed the standing committees for the ensuing year.

A committee was appointed on Dr. Edgar's special lunatic asylum.

Dr. W. C. Glasgow then read a paper on "Electricity and its medical uses."

Referred to the Committee on Publication.

Dr. Wilson, of Weston, read a paper upon "Progressive Surgery" to the Association.

Adjourned to meet next year at Jefferson City.

Mason County Medical Society.

Pursuant to a call, a large majority of the members of the medical profession in Mason County met in the council chamber, Maysville, Ky., Monday, May 11th.

The meeting was called to order by Dr. T. E. Pickett, on whose motion Dr. Basil C. Duke, of Mayslick, was called to the chair, and Dr. A. G. Browning, of Mt. Gilead, appointed Secretary.

Dr. M. F. Adamson, of Maysville, moved the appointment of a Committee on Organization.

The Chair appointed Dr. M. F. Adamson, Dr. John Shackle-

ford, Dr. R. L. Cooper, Dr. J. W. Gault and Dr. T. E. Pickett.

A constitution and by-laws were reported and adopted.

On motion of Dr. J. P. Phister, of Maysville, the present Committee on Organization, together with the Chairman and Secretary of the meeting, were continued, the Association to meet again at 11 o'clock A. M. on the second Monday in June.

The following gentlemen present signified a desire to become members of the Association:

Drs. John Shackleford, M. F. Adamson, John P. Phister, T. E. Pickett, S. M. Cartmell, Maysville; R. L. Cooper, James Taylor, Orangeburg; A. G. Browning, Mt. Gilead; W. H. Lawwill, J. W. Gault, Murphysville; Thomas J. Dobyns. S. M. Downing, Sardis; A. Hunter, Washington; J. A. Reed, Minerva; Basil C. Duke, Mayslick.

On motion, the meeting adjourned to meet in the council chamber, Maysville, on the second Monday in June, at 11 o'clock A. M.

The Medical Convention, which founded the first medical society ever established in this part of Kentucky, met at Washington, (then the county seat of Mason,) on the 22d of November, 1839. The following is a list of the members:

Thomas W. Nelson, J. E. McDowell, H. J. Moffet, M. M. Ambrose, A. Duke, T. H. Fox, T. C. Tebbs, G. D. Coleman, I. Pollock, William H. Robertson, Nicholas T. Marshall, L. M. Lawson, A. D. Keith, John N. Taliaferro, Stokes A. Smith, W. B. Johnson, John Shackleford, John M. Duke, J. A. Coburn, Basil C. Duke, W. T. Taliaferro, V. G. Moss, A. H. Pollock, A. G. Burgess, Samuel K. Sharpe, John W. Henry, J. F. Dunnington, G. W. Mackie, W. C. Rannels.

The first officers of the Society were — President, Thomas W. Nelson; Vice Presidents, W. B. Johnson and J. E. McDowell; Secretary, L. M. Lawson; Standing Committee, John Shackleford, S. K. Sharpe, and W. T. Taliaferro.

Dr. B. C. Duke, one of the members of the original organization, was President of the Convention called last Monday, and Dr. John Shackleford, another member, resumed his old posi-

tion as a member of the Executive Committee. But few of the old members are now living.

NOTE.—Members of Societies will please send the proceedings of these Bodies.—ED.

CHEMICAL AND PHARMACEUTICAL.

"Diruit, ædificat, mutat."—HOR.

Protection of Hypodermic Solutions from Change by Keeping.—A paper on this subject by Dr. Edward R. Squibb, published in the Proceedings of the session of the American Pharmaceutical Association, held in Richmond, Va., 1873, and recently reprinted in pamphlet form with other papers by the same author, is of interest in connection with the above selection:

It is supposed to be established by the investigations of Dr. Bourdon, M. Delpech, M. Gubler, and M. C. Paul, that the growth of confervæ is the only cause of the changes which commonly occur in solutions of the organic alkaloids and their salts; and that these confervæ decompose the alkaloids and consume a portion of their constituents, so that the solutions become weaker as the growths increase. Various methods have been proposed and used to prevent these growths, but thus far none seem more simple or more effectual than the addition of one or other of the phenols; and the crystallized carbolic acid is perhaps the most convenient, if not the best of these. * * * It becomes of some consequence to know how little of the protecting agent can be used with average success.

The experience of several years in this laboratory has shown that one volume of a five per cent. solution of crystallized carbolic acid, in sixty-four volumes of a solution of sulphate of atropia of the strength of two grains in each fluid ounce, will generally, but not always, protect it from change. The carbolic acid here bears the proportion of about one-thirteenth of one per cent. * * * But once or twice in an experience of about six years it has proved ineffectual for protection.

In the endeavor to answer this query with accuracy, the first result reached was, that accidental circumstances from unknown causes sometimes prevent the growth of these confervæ in solutions not protected at all; and also admit of their presence in and absence from different bottles of the same solution, without discoverable relation to the proportion of the protecting agency. A series of solutions prepared in August, 1872, some unprotected, and others with various proportions of carbolic acid, stood until May, 1873, many of them remaining without growths of any kind, while those which produced confervæ did so without discoverable relation to the protecting agency. Supposing that the atmosphere of a laboratory might be the cause of these confusing results, fresh solutions of acetate of morphia and sulphate of atrophia were made, the former salt having proved to be the most easily attacked and the most rapidly changed. The bottles containing these solutions were placed for one week with stoppers out, in a hospital where such solutions were very liable to change. The solutions were then distributed into small vials, some without protection, and others with various proportions of carbolic acid. These vials were observed every month during the month of May, June, and July, until they ceased to show any further changes. One vial of the solution of sulphate of atropia which was entirely unprotected, failed, from first to last, to show any signs of change. Two vials of sulphate of atropia solution, and one vial of a pair of acetate of morphia solution, all protected with small quantities of carbolic acid, also failed to show distinct evidence of confervæ. But with these exceptions, the entire number of twelve pairs exhibited a diminution of confervoid growths, in proportion to the quantity of carbolic acid added, until the proportion of carbolic acid reached, in the solution of sulphate of atropia, about one-eighth of one per cent., and in the solution of acetate of morphia about one-seventh of one per cent., all with larger proportions remaining clear and unchanged. Hence it appears that solutions of some salts, though of the same strength, require more carbolic acid for protection; but the proportion which under ordinary cir-

cumstances will protect the most difficult ones of those tried, does not exceed about one-seventh of one per cent.

But these solutions were all made with distilled water, and with more than ordinary care, and were all filtered. When similar solutions were made with ordinary undistilled water, nearly double the quantity of carbolic acid was required to afford a doubtful protection. Hence these solutions should, under all circumstances, be made with distilled water, and be carefully filtered.

The query may then be answered as follows: When such solutions are properly made, the smallest proportion of carbolic acid which will protect them from change, is about one-seventh of one per cent.; but that a proportion of one-sixth of one per cent. is practically better and safer in ordinary practice, and that this latter proportion is unobjectionable in all known respects. To make these solutions with this proportion: * * first, make a five per cent. solution of carbolic acid.

Take of crystallized carbolic acid 10 parts, or 10 grammes, or 154 grains; distilled water 200 parts, or 200 grammes, or 3086 grains. Weigh the distilled water in a glass-stoppered bottle, capable of holding one-fourth more than the sum of the quantities. Melt the crystallized carbolic acid in the stock-bottle by setting this in water warmed to about 50° C. = 122° F., and weigh the quantity by pouring it carefully into the bottle containing the water, as it sits upon the scale. Then shake the whole together until the carbolic acid is dissolved, and filter the solution through paper.

Of this solution about fifteen minims in each fluid ounce gives a proportion of one-sixth of one per cent.

For a solution of sulphate of morphia, of the strength called "Magendie's Solution:"

Take of sulphate of morphia, solution of carbolic acid, 5 per cent., of each 2 parts, or 2 grammes, or 31 grains; distilled water, a sufficient quantity. Dissolve the sulphate of morphia in about 50 parts, or 50 grammes, or 775 grains, of distilled water; add the solution of carbolic acid, filter through paper,

and pass distilled water through the filter, until the filtrate weighs 57 parts, or 57 grammes, or 883 grains.

Mint as an Anti-Galactagogue.—Dr. Dasara determined to experiment for himself, and gives the details of a series of cases in which he tried the effects of the application of mint poultices, made from the young sprigs, at different periods of lactation. He found: (1.) It is an established fact that mint has the power of suppressing the lacteal secretion. (2.) The suppression of secretion takes place at whatever period of lactation the mint is employed. (3.) The effect takes place in a very short space of time; according to his experiments in from three to five days. (4.) The suppressive action of mint can be localized to one breast. (5.) No danger, nor even any inconvenience arises, either to the mother or child, either from the use of the mint, or from the suppression of the secretion. Sig. Dasara does not state the species of mint he employed.—*The Practitioner—New Remedies.*

Styptic Cotton. By Dr. C. Ehrle. (Berliner Klin. Wochenschrift, VII, 37.)—Dr. Ehrle has subjected cotton to a simple process, within the reach of every practitioner, and claims thereby to have obtained a reliable means of arresting many troublesome hemorrhages. He has used his preparation after several quite extensive operations performed by him, as well as in the dressing of a number of wounds complicated with considerable hæmorrhage, and has had every reason to be satisfied with the results.

The process of preparation is begun by boiling the best, cleaned, American cotton, for from half an hour to an hour, in a four per cent. solution of soda, then washing it out repeatedly in cold water, wringing and drying. By this means the cotton is completely disinfected, deprived of everything fatty, and prepared equably to imbibe any fluid presented. Now it is saturated from one to three times, according to the strength desired, with the *liquor ferri chloridi,* diluted by the addition of one-third of its bulk of water. Then, the fluid being

well pressed out, the cotton is thoroughly dried in a draft of air, but not in the sun, nor at a high temperature, and when dry it is picked fine. Prepared in this way, the styptic cotton is of a yellowish brown color, and feels like the ordinary article. As it is very hygroscopic, it must always be kept in a dry place, and for transportation in the field, should be packed in rubber bags or in bladders.

The styptic effect of the finely and evenly divided chloride of iron is materially aided by the dry cotton, and by the large surface offered as a field for chemical action. The application of this cotton to a wounded surface is claimed not to be very painful. It appears to favor the healing process by drawing to itself all the superfluous fluids and preventing their decomposition.

In case of profuse suppuration, the styptic cotton may be used, mixed with lint or with pure cotton deprived of its fat, for the purpose of absorbing the pus and stimulating the surface of the wound to new action.

Finally, Dr. Ehrle thinks that the use of this material, on the field of battle, might often obviate the necessity of ligating vessels, while its application is so safe and simple that it may be entrusted even to the common soldier.

Phytolacca Decendra.—C. H. Tidd, of Ohio, after reporting in the "Southern Medical Record," (February, 1874,) the histories of several cases treated with this drug, concludes with the following paragraph:

That this remedy is equal to potassi iodidi in all cases of adenitis, I do not claim, but that in *certain cases* it has proven itself vastly superior in my hands I well know; and as a remedy in muscular rheumatism, and in some cases of articular, it possesses advantages over many of the highly vaunted remedies of the day.

Bromide of Potassium as a Prophylactic to Mercurial Ptyalism.—M. E. Dozier, M. D., Attala, Ala., says: Experience

with the bromide of potassium has induced me to abandon the chlorate almost entirely, as the bromide answers the purpose more satisfactorily. The latter not only relieves the irritating effects upon the mucous surfaces, but in addition, induces soothing and quieting effects, which are certainly much to be desired.—*Jour. Mat. Med.*

Preservation of Vaccine Crusts.—Dr. E. L. Griffin, of Fondulac, Wisconsin, in a letter to the "North-Western Medical and Surgical Journal," says: Crusts can be kept good and reliable by burying them in an open-mouthed bottle, in *burnt alum*, well and securely corked. This possesses better than anything I know of the property of non-absorption of moisture.

Dr. Hassall has recently analyzed nineteen samples of sherry wine, eight of them of the highest quality procurable in the London market. Not one of them could be considered as a pure and natural product of the grape; all of them had been heavily fortified by the addition of spirit, and seventeen of them contained a notable amount of sulphate of calcium.—*Philadelphia Times.*

Chloroform.—Dr. J. H. Saunders reports ("Canadian Lancet, March 2) a case of recovery without vomiting in a man who had swallowed an ounce of chloroform.—*Phil. Med. Times.*

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

"Judex damnatur cum nocens absolvitur."

HALF-HOUR RECREATIONS IN POPULAR SCIENCE—PART. 6: UNCONSCIOUS ACTION OF THE BRAIN AND EPIDEMIC DELUSIONS. By W. B. CARPENTER, M. D., London, Eng.

This little book is one of a series; published in Boston; and intended for the secular Public. The number now under con-

sideration contains two papers of much interest, by the cultivated and accomplished Dr. Carpenter, of England. These papers were read before an unprofessional English audience, and therefore should not be objected to as containing nothing new to the physician. In his first paper ("Unconscious Action of the Brain"), Dr. Carpenter takes up many points which the general reader has usually considered as belonging peculiarly to the somewhat abstruse science of metaphysics, and he has dealt with his subject lucidly and briefly, treating it from a physiological point of view. So suggestively does he write, that he seems to possess the ability of presenting facts and truths to the mind without having really stated them. He analyzes many obscure mental phenomena, so as to place them within the comprehension of all, and clearly demonstrates that the mind is subject to the same laws as the body, and is even more susceptible to their influence.

Dr. Carpenter has thought much on the proper and best mode of training the mind so as to develop it most usefully and healthfully, and his suggestions to teachers are practical and full of wisdom. It is very interesting to know that the carefully-trained mind will sometimes come to the relief of the fatigued will, and, seemingly, entirely independent of that faculty, work out accurate results. Musicians, poets, painters, mechanics, have all given valuable testimony on this point. They have frequently failed to work out a given result, and after immense and determined labor, have given up the effort as futile. Then putting the subject by for a time, they give their minds to something else, endeavor to obtain complete repose, and even while making this effort, the end is suddenly and unexpectedly secured.

Dr. Carpenter says: "A very curious example of this was mentioned to me a few days ago by Mr. Wenham, a gentleman who has devoted a great deal of time and attention to the improvement of the microscope, and who is the inventor of that form of binocular microscope (by which we look with two eyes and obtain a stereoscopic picture) which is in general use in

this country. The original binocular microscope was made upon a plan which would suggest itself to any optician; it involved the use of three prisms, giving a number of reflections, and every one of these reflections was attended with a certain loss of light and a certain liability to error. Now, Mr. Wenham thought it might be possible to construct an instrument which would work with only one prism, and that this prism could be withdrawn, and then we could use the microscope for purposes to which the binocular microscope could not be applied. He thought of this a great deal, but he could not think of the form of prism which would do what was required. He was going into business as an engineer, and he put his microscopic studies aside for more than a fortnight, and attended only to his other work, thinking nothing of his microscope. One evening while he was reading a stupid novel, as he assures me, and thinking nothing of his microscope, the form of the prism that should do this work flashed into his mind. He took his mathematical instruments, drew a diagram of it, worked out the angles which would be required, and the next morning he made his prism, and found that it answered perfectly well. Upon that invention nearly all the binocular miscroscopes made in this country have been constructed."

The importance of the automatic working of the mind is clearly shown; that work which goes on without any more control or direction of the will than when one is walking and engaged in a train of thought that makes him unconscious of the movements of his limbs. The will gives the impulse in the first instance, just as when he starts on his walk; and not only this, but the will keeps before the mind all the thoughts which it can immediately grasp, or which association suggests, that bear upon the subject; but they require to "work themselves out," and do this much oftener when left to themselves. These results, however, can only be produced in the mind which has been trained and disciplined; and this is the practical suggestion to be reached — an approximate idea of the great value of early and careful mental discipline — by which the mind ob-

tains the method of working by itself. The most wonderfully creative of all musicians, Mozart, whose music flowed from him with a spontaneousness that no musician has ever equaled. went through, in early life, a most elaborate course of study, imposed upon him in the first instance by his father, and then maintained by himself. When his contemporaries remarked how easily his compositions flowed from him, he replied: "I gained the power by nothing but hard work." He had the most extraordinary combination of this intuitive musical power, with the knowledge, derived from patient and careful study, that probably any man ever attained.

Dr. Carpenter dwells especially upon the fact that "common sense" is the *general resultant of the whole previous action of the mind.* The judgment of common sense is the judgment which is elaborated by the whole previous course of mental discipline. Just according as the mental life has been good, true and pure, is the value of this high common sense reached.

The other paper contained in this book, is a brief review of the Epidemic Delusions which from time to time have taken possession of the mind of large numbers, with an investigation of the condition and action of the minds thus affected. He dwells upon the disastrous consequences of a neglect of that primary culture and discipline on which he had laid so much stress, shows how whole communities have been drawn into the most absurd beliefs; that great masses of people have been seized upon by dominant ideas, accompanied with the excitement of some passion or strong impulse, which leads to the most absurd results. He gives a number of instances of this as having taken place in large schools, nunneries, asylums, etc. He notices briefly the epidemics of witchcraft, the dancing mania, and other manifestations of the principle involved.

He describes the more modern epidemic of Spiritualism, and gives many instances in which things most absurd in themselves and most inconsistent with the facts of the case were believed in by persons of great ability, and upon all ordinary subjects, of great discrimination; and he attributes the spread and

increase of Spiritualism to the longing which is common to all, in their innermost nature for a higher future existence.

Dr. Carpenter has himself devoted much attention to the subject, and gives this as his testimony: "I have had to come to the conclusion that, whenever I have been permitted to employ such tests as I should employ in any scientific investigation, there was either intentional deception on the part of interested persons, or else self-deception on the part of persons who were very sober-minded and rational upon all the ordinary affairs of life. I am perfectly satisfied that a very large number of these Spiritual phenomena are simply subjective sensations, and are the result of expectation on the part of the individual. He then describes some interesting cases which it had recently been his business to carefully analyze, and states that there is nothing too strange to be believed by those who have once surrendered their judgment to the extent of accepting as credible things which common sense tells us are entirely incredible.

Dr. Carpenter closes this interesting paper with an urgent appeal for more general scientific culture, and says: "When once a good basis is laid by primary education, I do not see what limit there need be to — I will not say the learning of future generations — but to their wisdom, for wisdom and learning are too very different things. * * * There are great differences as to their effects upon the mind, among different subjects of study; and I have long been of the opinion that those studies afford the best discipline in which the mind is brought into contact with outward realities; a view which has lately been put forth with new force by my friend, Canon Kingsley. You know Canon Kingsley has acquired great reputation as an historian. He held the Professorship of History at the University of Cambridge for many years, and, in fact, has only recently withdrawn from it. Canon Kingsley also early acquired a considerable amount of scientific culture, and he has always been particularly fond of Natural History. Now, he lately said to the working men of Bristol, that he strongly recommended them to cultivate science rather than to study

history; for this reason, that he found it more and more dificult to satisfy himself about the truth of any past event; whilst on the other hand, in the study of science, he felt that we were always approaching nearer to the truth.

We gain a certain point, and may be satisfied we are right up to that point, though there may be something beyond; while the elevation we have gained enables us to look higher still. It is like ascending a mountain; the nearer we get to the top, the clearer and more extensive is the view. I think this is a far better discipline for the mind than that of digging down into the depths of the past in search for that we can not hope ever thoroughly to bring to light." Mr. Proud has given the same testimony, and does not hesitate to say that, notwithstanding the importance and profound researches he has made in history, that he is more than ever convinced of the difficulty of arriving at absolute truth upon any historical subject. Dr. Carpenter feels certain that this is not the case with science; but says, "I believe there is absolute truth in science, which, if not at present in our possession, is in our reach; and that the nearer we are able to approach it, the clearer will be our habitual perception of the difference between the real and the unreal — the firmer will be our grasp of all questions which rise in the ordinary course of our lives, and the sounder will be the judgment we form as to great political events and great social changes. Especially will this gain be apparent in our power of resisting the contagious influence of Epidemic Delusions."

This interesting book can be obtained from Davison & Bro., Louisville, Ky., or, Estes & Lauriat, Boston, Mass.

LIGATION OF ARTERIES. Translated from the French of L. H. Farrabeuf by JOHN D. JACKSON, M. D., Danville, Ky.

This is a book of about a hundred and fifty pages, finely illustrated with engravings, just issued from the publishing house of Lippincott & Co.; handsomely bound and printed, and of neat and convenient size; and comes to the Profession not an hour too soon to supply at once to the teacher, practitioner, and

student of surgery, a want that has always been experienced. It is all that it claims to be — a complete but concise manual of operative surgery on the ligation of arteries.

The translator, already widely known in this country and Europe, could not have chosen a task for his leisure hours, the completion of which would have been more acceptable to the Profession. In its preparation, he has bestowed his characteristic care and accuracy, and added another to his many contributions to American medical literature, which will soon find its way to every well-selected library. J. M. K.

LECTURES ON DISEASES OF INFANCY AND CHILDHOOD. By CHARLES WEST, M. D., London, England. Fifth American from Sixth London Edition. Philadelphia: Henry C. Lea. 1874.

When a work has reached its sixth edition at home and its fifth abroad, its popularity and usefulness can not be questioned. There is no work in the English language more familiar to the physician than West on the Diseases of Children. Nearly all have read it, and on the present occasion it is only sufficient to call the attention of the public to the issue of a new edition. The author has made 181 post-mortem examinations since the date of his last edition, June, 1865. The cases recorded are 743 more in number, making a record of fully 2,000 cases cited in the work. Dr. West has attended over 40,000 children and has made 600 post-mortem examinations. This, with nearly fifty years of active study and practice, certainly furnishes a sound basis for authorship; very acceptable in these days, when many, with their diplomas yet moist with the ink of signatures attached and with no clientage, rush into print, and claim to have issued an authority, because they have paid for the printing of a volume.

West's work has been repeatedly published in America, Germany, France, Holland, Russia, and Italy. It is a standard and classic authority which all should possess.

It is handsomely issued by Mr. Lea, who has taken the advice, so frequently given, of sending to the Press the best and

most durable (leather) issues of his publications. Text books in muslin binding are of little value to those who wish to use them.

THE SCIENCE OF HOMŒOPATHY; OR, A CRITICAL AND SYNTHETICAL EXPOSITION OF THE DOCTRINES OF THE HOMŒOPATHIC SCHOOL. By C. J. HEMPEL, M. D. Balrick & Tafel, Grand Rapids, Michigan.

Twenty years since, this work would have been read by the Press; if for no other purpose than that of analytical and exhaustive review. To-day, there is no Medical Press which will take this trouble; for it is not necessary to exhibit to any one the absurdities, or to prove to any one the fallacies of what is still foolishly termed the science of hmocœopathy. Its exaggerations; its unfair and illogical deductions; its preposterous claims; the untruthful, unmanly, and inconsistent course of its advocates, are all too well known to need exposure. Anstie has well said, that, like all impostures, homœopathy has passed through its varied phases of exaggeration and sensationalism, and has now reached that of duplicity and falsehood. Homœopathic granules not intended for physiological effect contain not even a chemical trace of the medicine which they are said to contain; while when real effect is intended to be secured, homœopathic granules contain violent doses of virulent alkaloids. Dickson, with pithiness and wit, well observed, that "charlatanism will always die, but can never be killed." The decadence and general repudiation of homœopathy prove the truth of this remark. Under violent assault and criticism it battened on the notoriety given to it, and flourished apace; treated with silence and repudiation, it dies rapidly, and is fast passing away. Like Canova's great picture, "The Descent to the Tomb," one admires it most when standing at the sepulchre.

The author has furnished a vignette of himself with the volume, and as this last is sent for criticism, any allusion to the embellishments is of course fair and anticipated. The author seems to be a mild, genial and weak old gentleman, who though, by the ethnological laws of Aristotle, is not to be repudiated

as a representative of the civilized races, would, by the test of Camper or Blumenbach, be referred to some of those earlier species of organisms which (according to Darwin and Huxley) ante-dated the existence of man.

As a whole, this volume answers an admirable purpose in filling up, with patent-office reports, speeches of congressmen, etc., those gaping spaces on the book-shelves not yet demanded for works of interest and value. The whole work seems to be (in homœopathic phraseology) "a high attenuated dilution" of a single, very weak and foolish idea, that results are in an inverse ratio to cause, and that the less a force the greater the effect produced. The inspired writer has said, "Much wisdom is a great trouble," and if the converse of this be true, this author must be happy.

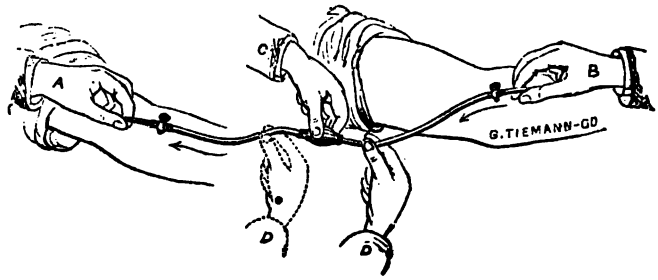
MISCELLANEOUS.

"Non omnes eadem mirantur amentque."

AVELING'S APPARATUS—MODE OF OPERATION.—First place the apparatus in a basin of tepid water, and, while completely under the water, to fill it and insure its cleanliness, compress the bulb until the air is expelled.

The patient having been brought to the side of the bed, and the arm bared, a fold of skin over a vein, at the bend of the arm should be raised, transfixed and divided. The flattened vein now brought into view, should be seized with a pair of fine forceps, raised, while an incision is made in it, and the bevel-pointed silver tube inserted. In taking this tube out of the basin, it should be kept full of water, by placing the tip of the thumb over its larger opening. While the operator is doing this an assistant should prepare the arm of the blood-donor, as in ordinary bleeding, making an incision direct into the vein, and passing the round-pointed tube into it, with its point

towards the fingers. This person should then be brought to the bedside of the patient, and seated in a chair. It is better not to secure the tubes in the veins by ligatures. *B* represents the



hand of an assistant holding the efferent tube and the lips of the small wound together, and *A* shows the afferent tube in the same manner. The india-rubber portion of the apparatus, filled with water, and kept so by turning the cock at each end of it, is now fitted into the two tubes. The cocks are then turned straight, and the operation commenced by compressing the india-rubber tube on the efferent side *D*, and squeezing the bulb *C;* this forces two drachms of water into the afferent vein. Next shift the hand *D* to *D'* and compress the tube on the afferent side; then allow the bulb to expand slowly, when blood will be drawn into it from the efferent vein. By repeating this process, any quantity of blood can, at any rate, be transmitted, the amount being measured by counting the number of times the bulb is emptied.

The advantages of this method of transfusing blood are:

1st. The chances of coägulation are small, because the blood is removed from the action of the living vessels for only a few seconds, and glides smoothly through the india-rubber pipe without being exposed to the air.

2d. The apparatus is effective, simple, portable, inexpensive, and not likely to get out of order.

3d. The operation is safe, easy, uninterrupted, and a close imitation of nature.—*Ex.*

Poisoning by Homœopathic Spirits of Camphor.—Dr. G. Johnson related to the Clinical Society three cases of poisoning by this preparation (Epps'), which is 7.2 times as strong as the spirituous camphoræ, B. P.

A young lady, aged twenty, having a cold, took twenty-five drops before going to bed. In a short time she was found foaming at the mouth, black in the face, and violently convulsed. She vomited blood-tinged fluid, smelling strongly of camphor, had severe gastric pain, remained unconscious for several hours, and was upset for six months afterwards.

A clergyman was advised to take for a cold three drops of the same preparation every five minutes for an hour. After the eighth dose he was seized with intense headache, which confined him to bed for forty-eight hours, and he was afterwards so weak and ill that he was unable to enter his pulpit for two months.

A young lady, aged nineteen, took for diarrhœa a teaspoonful of the same solution. She was rendered unconscious for several hours, and her nervous system was disturbed for several days.—*British Medical Journal*, Nov. 22.

Homœopathy has now reached the culmination of its many inconsistencies, in passing "from the irrational and ludicrous extreme of infinitesimal solutions to the dangerous extreme of the greatest possible concentration of active and poisonous drugs." Compare on this subject an interesting leader in the "British Medical Journal, Nov. 22, exposing the scandalous frauds under cover of which many homœopathists now practice.

Influence of the Soil on the Development of Intermittent Fevers.—A paper was lately read before the French Academy of Science on the influence of the soil in the development of intermittent fevers, and of the danger of turning up the earth in large cities. In support of his views, the writer adverted to the fact that, in 1731, after a succession of unusually dry seasons, the bed of the Seine was considerably lowered, and a great number of plants, which were lying in a state of putrefaction

on the banks of the river, exhaled a fœtid odor; nevertheless, there was not a single case of intermittent or other so-called malarious fever observed. In 1811, while the canal St. Martin was being dug, and in 1840, when the present fortifications were being constructed, malarious fevers were rife, which were attributed to the emanations produced by the turning up of the soil. An unusual occurrence of these fevers prevailed also in epidemic form in certain quarters of Paris during the formation of the boulevards and avenues which intersect this great city.—*Irish Hospital Gazette.*

The Treatment of Epidemic Purulent Ophthalmia by Isolation in Tents.—M. Dr. Em. Parisot has studied a very grave epidemic of purulent ophthalmia at the hospital St. Stanislas of Nancy during the year of 1872.

In giving a detailed account of this epidemic, which seemed to have been imported like a contagious disease and then to have developed and spread among the badly nourished and unhealthy infants, he describes as the most efficacious treatment a proper hygiene, which consists in the immediate isolation of the sick by placing them in *good tents in the open air*, with amelioration in alimentary regimen, clothing and general attention.

This treatment modifies favorably also constitutional debility, scrofula and even acute diseases.—*Rev. Med. de l' Est.*—*Gazette des Hopitaux.*

MEDICAL NEWS.

'Nulla dies sine linea."

Louisville City Hospital.—The medical and general public will be pleased to learn that Dr. G. H. Walling has been re-elected to his old position, as a member of the Board of Commissioners of Public Charities. This gentleman has done so much

for the Medical Institutions of this city, that he fully deserves any honor which may be accorded to him. The City Hospital (known as the Marine Hospital) especially owes almost all of the many improvements in it to his excellent judgment and conspicuous fidelity. Its management and general condition have been wonderfully changed and improved by him, and now that he has been reëlected to his old position, this Institution will become a source of greater pride than ever to the medical and general public of this city. It is a reflection on all concerned that he should have had any opposition, for it should have been not only a pleasure, but a privilege for all to reëlect him to his old office. No election could give the friends of the Hospital as much pleasure, and all true and just men will take pride in the return to office of this faithful officer and efficient physician.

It is rumored that there will be an effort made to abolish the method of competitive examinations in securing resident graduates for the resident staff of the Louisville City Hospital. The report can not be credited. In the first place, it would be a return to a system of favoritism in appointment, repudiated now in all first-class Institutions. In the next place, it would be the ruin of the Medical Department of the University of Louisville, for it would be a virtual acknowledgment on the part of the Faculty of that Institution, that after a faithful trial of four years, they had finally abandoned the hope of getting, yearly, more than one of the four positions offered to the graduates of the Medical Colleges of Louisville. While in the nine candidates from the University, only one secured a position in the first six grades; and while from the Louisville Medical College, of the six applicants, only one failed to obtain a position in these grades, still the Faculty of the University should not be disheartened; they may fail for four years successively, and yet succeed. The advice given by Sairey Gamp to Mrs. Harris is earnestly given to them: "Make an effort."

Prospective Convention—"There is some talk" of a prospective

convention here of cheap-fee medical colleges. There seems to be great nervousness on the subject. At the last meeting of this kind, there were only three colleges represented; one delegate took the chair; one acted as secretary; and the third constituted himself the whole body of the convention. No motions could be made or put, as there was but one member to present them. There was no debate, as there was but one member to speak. There was no fund created, as the election of a treasurer would have dissolved the convention. Adjournment seemed to be the only thing possible and advisable. After the adjournment, and since that time, it seems to be the sentiment of that convention, and indeed, of every one else, that it was, as Mantalini would say, "a Demnition Body." It is not surprising that the details of its reässembling are discussed in a whisper.

Meeting of Surgeons.—There was a meeting of Confederate Surgeons at Atlanta in May. The proceedings have not yet been received. As a politcal movement, such action would be nugatory. As a scientific assemblage, it is fully eight years too late. Most of the valuable available papers of Confederate surgeons have been published; the great body of them were burned at Richmond, lost or captured. Socially considered, such a reünion would be most delightful; but alas! who of those who worked or fought for the "Lost Cause" can afford to lay aside the work of daily life to expensively visit and expensively unite in such delightful assemblies?

A Convention.—During the month of May there has been a convention at Nashville, Tennessee, of the Superintendents of the Lunatic Asylums of this country. It is hoped that some of its members will furnish this Journal with so much of the debates or proceedings as may be of interest to the Medical Profession at large.

The extirpation of the larynx for the first time in the history of surgery was performed by Professor Billroth, December, 1873.

The operation was a success. The patient has now a metal larynx, and speaks intelligibly.———Dr. Stokes is now President of the Royal Irish Academy.———The President of the Royal College of Physicians, Dr. George Brunows, has received from Queen Victoria the order of knighthood.———Professor Sharpey has received from the British Government a pension of one hundred and fifty pounds per annum.———The chair of Nélaton is now occupied by M. Gosselin; Balbiani now occupies the chair made vacant by the death of M. Coste in the College of France———The American Medical Association will hold its twenty-fifth annual session at Detroit, June 2, 1874. Unless this Association meets soon in the Southern States, it will lose the chief part of its southern membership. It should meet next year at Louisville.———At its last commencement, the University of Michigan conferred the degree of M. D. upon eight females.———So far as can be ascertained, the number of graduates in medicine in the United States in the spring of 1874, is 1,620.———The "Journal of Psychological Medicine," Dr. W. A. Hammond editor, is to reäppear in July.——Dr. C. M. Brush succeeds Dr. Miner as editor of the "Buffalo Medical and Surgical Journal."———The Canada Medical Society meets at Niagara Falls August 1, 1874.———In Paris there is one physician for every nine hundred inhabitants.———Beigel, of Vienna, has recently claimed that ovulation and menstruation in the human female are independent of each other.——— Sir William Fergusson has identified the remains of Dr. Livingstone by the comminuted ununited fracture, about the upper portion of the humerus, formerly treated by him when the distinguished traveler was under his charge in London.———In building the Panama railroad 81,000 human lives were destroyed by malaria, this was at the rate of one man for every yard of the track.———The "Philadelphia Times" is responsible for the following: A convalescent patient was asked by a pious friend who his physician was, and he replied: "Dr. Jones brought me through." No, no," said the friend, "God, and not the doctor, brought you through." "May be he did," said

the patient, "but you can bet the Doctor will charge for it." ——*Birth.*—To Dr. Charles Brooks and Sallie, his wife, at Marshall, Texas, April 24, 1874, a daughter.——According to the "London Lancet," the English Committee formed during the Franco-German war have $400,000 unexpended.———Pullman cars have been introduced into England, and English physicians speak very highly of them.———The "New York Medical Journal" seems to have determined never to give this Journal credit for any of the articles or items of news extracted from it. One can not call that Journal, under such circumstances, a very *creditable periodical.*———The City Councils of Vienna and Gratz have, by municipal appropriation, provided for public cremation.———Villemin has been elected a member of the Pathological section of the Academic de Medicine, Paris.——— A female epileptic, in one of the hospitals at Cincinnati, has recently died from the effects of electric needles plunged in her brain by one of the medical enthusiasts of that city—Dr. Bartholow.———The cholera is slowly advancing from Munich through Silesia and Bohemia.———Dr. A. K. Gardner, of New York, has recently published a sensational and censurable work termed "Conjugal sins against the laws of Life and Health, and their effects upon the Father, Mother, and Child." It may prove profitable, pecuniarily, but will most probably bankrupt him professionally.———E. Steiger, 22 Frankfort street, New York, has published the handsomest Atlas of venereal diseases to be found in this country.———Dr. B. F. Dawson has retired from the editorial management of the "New York Obstetrical Journal," a position which he has long held with credit and distinction. Dr. P. F. Munde succeeds him, and will, it is believed, discharge the duty handsomely.———Mr. Erichsen, the surgeon, terms the use of Professor Dittel's elastic ligature a return to barbarism.———Some one said to Sterne that apothecaries bore the same relation to doctors that attorneys do to barristers. "No," said the wit, "apothecaries and attorneys are not alike; for the former deal in scruples, and the latter never have them."—*Baltimore Physician and Surgeon.*———During the recent

Ashantee war, the Medical Director of the British army and his assistant were repeatedly under fire. They were highly complimented in Field and Home orders.

MORTUARY.

Died, May 10, 1874, at 5½ o'clock in the afternoon, Gustavus W. S. Gaillard, infant son of Dr. E. S. Gaillard and Mary E., his wife; aged four months and eleven days.

At a meeting of the Class of the Louisville Medical College, held on Monday, May 11, 1874, the following preamble and resolutions were adopted:

Whereas, It has pleased Almighty God in a special dispensation of His all-wise but unerring Providence, to remove from the threshold the infant son of our esteemed Professor, E. S. Gaillard; therefore be it

Resolved, That while we fully recognize and bow in humble submission to the decree of Him who doeth all things well, we can not refrain from dropping a tear of sympathy for our bereaved Professor and his sorrowing wife in this the hour of their sad affliction.

Resolved, That we as a body attend the funeral.

Resolved, That a copy of these resolutions, expressive of our heartfelt sympathy and sincere condolence, be tendered to the family, and the same be sent to the "Courier-Journal" for publication.

Lawrence Carr, W. F. G. Young, F. B. Oatis, Irwin Keller, A. P. Smith, W. A. Davis, C. A. Seaton, H. Ball, J. S. Blair, J. B. Booth, W. S. Fall, and S. E. Dyke.

EDITORIAL.

"Nullius addictus jurare in verba magistri."—Hor.

End of Volume Seventeen.—With this number ends volume seventeen. This volume, it will be seen, contains 793 pages, or 120 pages (one entire Journal) more than the editor agrees to give for the present subscription price. The volume is exactly 118 pages larger than the volume of the "New York Medical Journal" issued in the same space of time; yet that Journal is being extensively advertised as the largest Medical Monthly in this country. That the "Richmond and Louisville Medical Journal" is what it claims to be, viz: "the largest

Medical Monthly in America," is conclusively demonstrated by figures at the end of each of its volumes.

To the old, familiar friends of this work, it is unnecessary to say anything in regard to its policy and management; but to recent subscribers a few words are not inappropriate. It is again announced, that the policy of this Journal is to make it, as far as possible, a real mirror of the present status and progress of medical science in all of its departments; and to insure to its subscribers, in advance, that mass of information which is specially sought in the latest medical "text-books;" these books being nothing more, as a rule, than the aggregation of judicious gleaning from contemporaneous medical journals. In addition to such a course of management, this Journal will always responsibly criticise public medical men and public medical institutions; public medical movements; and all of the medical publications issued. Some may object to this criticism of public medical men, public medical institutions and movements; but such has always been the course of this Journal, and this course will never be changed. Medical science is always self-protective; its lovers will always sustain, develop and improve it; and even if this were not done by them, medical science is so connected with all other sciences, that if these be advanced or improved, the science of medicine must progress also. It is thus self-protective. This is not true, however, of that which is of equal value and importance to every physician of proper pride and integrity; it is not true of the character of the profession and of the proper management of public institutions. Nothing now guards the character of the profession, and secures honest administration in public medical institutions so well as the Medical Press, and Medical Societies, whose influence the Press multiplies and disseminates. Whether this Journal can accomplish good results here, is not a question for its editor to decide; he has always decided, however, to try and do so; and he will continue to try to do so, leaving to others to determine the measure of any success that may be achieved. Such will be the continued course of this Journal.

It has no capital other than an unshaken confidence in the integrity and fidelity of its supporters. It has always based all of its operations and improvements on this capital, and has never had cause to regret such a course. The supporters of the work are respectfully reminded of this fact; that the progress and efficiency of the work depends upon them; and they are kindly asked to furnish this support with promptness, remembering that this season of the year, trying pecuniarily to each of them, has all of such trials aggregated in the Journal office, unless each subscriber, appreciative of this manifest fact, so acts as to render such a trial impossible.

With this brief statement and explanation, the editor thanks his many friends for their generous support, and asks a continuance of their influence and kindness.

The first number of the next volume will, as usual, contain a valuable likeness of some prominent member of the medical profession.

FŒTI.—There is, perhaps, no department of medicine which has been more thoroughly studied than that relating to the interesting subject of embryology. Indeed, one can scarcely expect to learn anything new in regard to it. Yet discoveries of importance are now and then made, even in a field as faithfully tilled as this has been. Bischoff, Berry, Pouchet, Coste, Goodsir and Owen, have all reaped abundant harvests therein, yet the humble gleaner still occasionally finds something worthy of preservation. Meigs, it will be remembered, gave special attention to the study of the embryo of the opossum, that most cunning of brutes, but he did not learn all. There is a species of fœtus even more marvelous and interesting. This is an embryo which, secretly passing nearly through the mystic stage of incubation, is now and then found to approximate even the very period of nativity, yet only to disappoint the hopes of the embryologist, who, anxious to analyze and dissect it, is suddenly called upon to listen to the sad tale of unexpected abortion. The Faculty of the Louisville Medi-

cal College have recently been watching, with great anxiety, the development of several of this interesting species of fœtus; anxious to foster the gestation; ready to assist at the labor. But alas! alas!! each one of these gentlemen has been called upon, with Helena, in "All's Well," to cry "oft expectation fails, and most there, where it most promises."

The embryos have all come to grief. The pregnancies have all suddenly terminated, and with them the fond hopes of those who were waiting, with interest, to secure as curiosities the interesting products. As is usual, and very proper, there has been due effort made to conceal, with becoming decorum, the fœti so untimely and prematurely brought forth; but the effort, fortunately for science, has been unsuccessful. Indeed, it is difficult to conceal, from the eye of the scientific, organizations so rare and peculiar. Those herein mentioned have been frequently examined by many; their configuration has become well known to almost every physician in this city, and while as spectacles they are melancholy and unpleasant to scrutinize, as rare fœtal specimens, they are duly valued and fully appreciated. There has been some conflict of opinion as to the proper scientific name to be accorded to them, but this difficulty has been compromised, and they are in future to be known as Professorial Fœti.

Note.—The distant reader will need some assistance in understanding this new chapter in embryology. Very recently the Faculty of the Louisville Medical College determined to reörganize the chairs of their Institution. It was a difficult undertaking, but they accomplished it most successfully. Those whose "wish was father to the thought," thought that the Faculty would fail; that they would be disorganized and destroyed. Thus hoping and thus believing, there occurred in this city a brilliant conception. An embryonic Faculty was begotten; the pregnancy was notorious and visible. The labor was sanguinely anticipated. But alas, for the illusions of hope! This pregnancy suddenly terminated. The multiple embryos, after passing through, not two, but many straits, have been suddenly cast forth and are offered to the public for gentle dissection. The parents are ashamed. The midwives and gossips are apologizing. They shall not be exposed, though they must understand, however, that they are well known. There is mercy, as well as truth in the records of embryology. To have discovered one professorial fœtus, is something for transcending the labors of Coste or Pouchet, but to have dis-

covered many of them, should entitle one to that crown of olive leaves which the old Greeks always accorded to him who outstripped his companions in the race. The temptation to point out these professorial fœti is almost irresistible; the ghost of Agassiz and Goodsir beckon one on to the deed; but it shall not be done. To be a professorial fœtus is punishment enough. Let the abortion be forgotten, and the products of it be left in appropriate obscurity.

STATE MEDICAL JOURNALS.—It is remarkable what erroneous judgment is often manifested in the desire to establish State medical journals. Almost every Association (not even excepting the National Medical Association) has expressed a wish to establish its own medical organ. Were this impracticable and indeed impossible feat accomplished, the circulation would of course be so small, that no one would send to such a periodical any paper of value for publication. Even were the capital furnished, the energy and severe labor secured, the complex organization effected, the whole movement would fail from the poverty of material offered; as it may be taken for granted, that papers of value are sent as a rule only where a large circulation can be secured for them.

Those inexperienced in such matters speak of establishing a journal as though this could be done as easily as the wish to do so can be expressed; whereas the history of journalism demonstrates that fully ninety per cent. of journals fail in a very brief period subsequent to the first issue of them. One to read or hear what a few sanguine gentlemen say on the subject of establishing a medical journal, would suppose that the tale of Aladdin's lamp was not an Eastern story, but a part of the history of American medical societies; in which the President had only to rub a great glass globe, when forthwith a first-class medical journal, with its expensive office, hosts of contributors and costly paraphernalia, issued beneficently from the chimney.

The greatest injury to medical journalism in America is the establishment of a multitude of small ephemeral publications, which in their poverty of resources, management, and circulation, are sure to fail and bring journals into discredit; engendering in regard to even the very best of them unjust distrust

and undeserved suspicion. The "London Lancet," the "London Times and Gazette," and many of the great European medical journals, have obtained their present wide-spread and admitted usefulness and value because the support of vast numbers of physicians is concentrated upon them, and not frittered away on diminutive and short-lived publications. If American physicians desire to create medical publications of national renown, pride and value, this can only be done as has been done in the British, German, and French empires, by the concentration of the purse and pen of the Profession on publications of assured position and extensive circulation. It is in this way that the Profession reap the largest return for money and labor contributed; and it is in this way that each physician can aid in directly building up works which shall be to them true guides, genuine mirrors, and reliable commentaries in regard to the present status and future progress of their profession.

This is unwelcome advice in its application to small, unstable, unsuccessful and experimental medical journals, but it is the best advice for those chiefly interested—viz., the Profession at large; thus only is the investment of their pen and purse most secure, and thus only is the largest return to be obtained. This may seem ungenerous towards journals of recent date, small in size and circulation. It is not so intended. The advice is given for the benefit of physicians, and if it be good and true advice, so long as the great Body of the Profession is benefitted, it matters but little whether a few suffer. Again, were this rule adopted, the struggling editors of small and untried works would have a greater incentive to enterprise and energy. State medical journals only ruin their originators; injure the present, and cripple the future of medical journalism. If the American Medical Profession yearly contributes, as it does, one hundred and fifty thousand dollars to the support of its periodical Medical Press, it is evident that if this sum be placed in the hands of a few journals, such a capital enables these journals to give their supporters volumes of great value; whereas, if this sum be frittered away on forty or fifty journals, the amount received

by each is so small that the return must be small, even from the solvent; while from very many others, there is not only no return to the Profession, but the money contributed is irretrievably lost. This illustration makes the whole matter so simple and plain, that the fatal effect of originating a multiplicity of small publications must be palpably evident to all.

MUNICIPAL BOARDS OF HEALTH.—There is no more melancholy chapter in medical literature than the proceedings of such Bodies, when they are unfurnished with capital and unfortified with power. They may legislate, as they often do, most wisely and well, but the municipality, unless influenced by fear, is deaf to their scientific warning and professional advice. The remedy is in the hands of the Profession. Physicians should resolve not to give their services to municipal Bodies without pecuniary return. As a general rule, what is not paid for is not valued. This is certainly the experience of all who watch the effect of sanitary and scientific advice gratuitously given, by physicians, to cities and towns. The whole idea of this being philanthropy is mere psychological moonshine. Cities can afford to pay for such service better than can individuals. If they be bankrupt and municipal paupers, then give advice gratuitously, but not otherwise. City attorneys are paid; city engineers are paid; druggists furnishing even stimulants and merchants furnishing food are paid. That physicians only should give their time, labor and talents, is Quixotic. Their philanthropy is ridiculed; unvalued; repudiated. The Profession must throw away these philanthropic stilts. By protecting themselves, they will most surely protect communities. Charge for service and advice, and these will be valued and appreciated.

It is true that some believe there is honor and profit in having their names advertised in the daily papers, and that being known as members of a Board of Health will surely bring them position and practice. This is a grievous error. There can be nothing more injurious to a physician than to be known as a member of a Board of Health absolutely powerless and un-

paid; whose counsels are often derided, and whose sincerest and best advice is set at naught. No real friend of a medical man can possibly feel anything but deep regret to see him in such a position. The Louisville Health Board is excellent, but powless.

BREVITIES.

The great Cruveilhier has just passed away; aged eighty-nine. He needs no epitaph or obituary.——The firm advertising the picture, "Life and Death," are not believed to be worthy of confidence. All money sent to this Journal has been refunded. If any sending money to the Journal have not received the amount sent, the fact, it is asked, should be reported without delay.—— It is said that the members of that embryonic Faculty, recently organized (in prospective only) for the Louisville Medical College, live mostly on mutton. The assertion is made chiefly on the faith of physicians in that old theory of Liebig, that the character of the diet may be always told by the character of the expression.——Dr. Fenner has received a grant of money from the Royal Society wherewith to prosecute his study of the brains of monkeys.——Hyrtl has just received a pension from his Government.——The recent embryonic Faculty, organized (in prospective only) for the Louisville Medical College, reminds all of but one single formation known to science; an entry in the table of logarithms—viz., a uniform row of ciphers, preceded or led by a black spot; the spot being very black, and the ciphers very indisputable.——"*Much Ado about Nothing.*"—The proceedings of the Cincinnati Academy of Medicine in regard to Dr. Reamy.——The Kentucky State Medical Society has prohibited the publication of personal newspaper articles by physicians. The best action possible. Now prohibit newspaper squibs as to the attending of alleged prominent individuals, by physicians. Such a doctor has attended so and so at such a hotel; he has set somebody's limb; he has somebody staying with him, etc., etc. It is all most disgusting. There are physicians here who have attended the most distinguished gentlemen in this

country for weeks, and at the chief hotels, and yet the fact never appeared in a newspaper. These newspaper items are all advertisements, usually furnished by the physician advertised. The whole matter deserves extreme reprobation.—— *What is an Hon. Fel.?*—In the Virginia State Medical Transactions it is observed that several gentlemen are thus characterized; gentlemen, too, of position and respectability.——La Fontaine tells the story of a fox who, after in vain trying to obtain some coveted grapes, walked off, declaring that they were not worth having after all. Æsop tells the story of another fox who, in trying to obtain that to which he had no right, was caught in a trap, and had his tail cut off; quite closely. He further adds, that this fox endeavored to persuade his companions that he was not ludicrously changed by the accident; but that they could not agree with him. These fables are especially enjoyed by those familiar with the devices of those medical hopefuls who tried so very hard to become the Faculty of the Louisville Medical College. Some of these think the grapes are not worth having after all!!! Some, like the fox that suffered the painful accident mentioned, try to believe that nothing very disfiguring after all has happened. It is noticeable, however, that if any one alludes to a trap or this College, they look very much like the mutilated fox in the fable mentioned. It is all very melancholy, but there is a wholesome lesson to be learned in all of this affliction. Even the most cunning foxes should remember that this wicked world is full of traps, and that they have tails which are always in danger; that if caught, they can not escape that ludicrous catastrophe which will inevitably subject them to unending ridicule. Quite a number have been recently caught, and the trap has cut them so curiously, that the temptation to offer a few pen pictures is irresistible. If these pictures render the originals absurd and ludicrous, they must remember that they sat for the likeness, and that the artist only "holds the mirror up to Nature."

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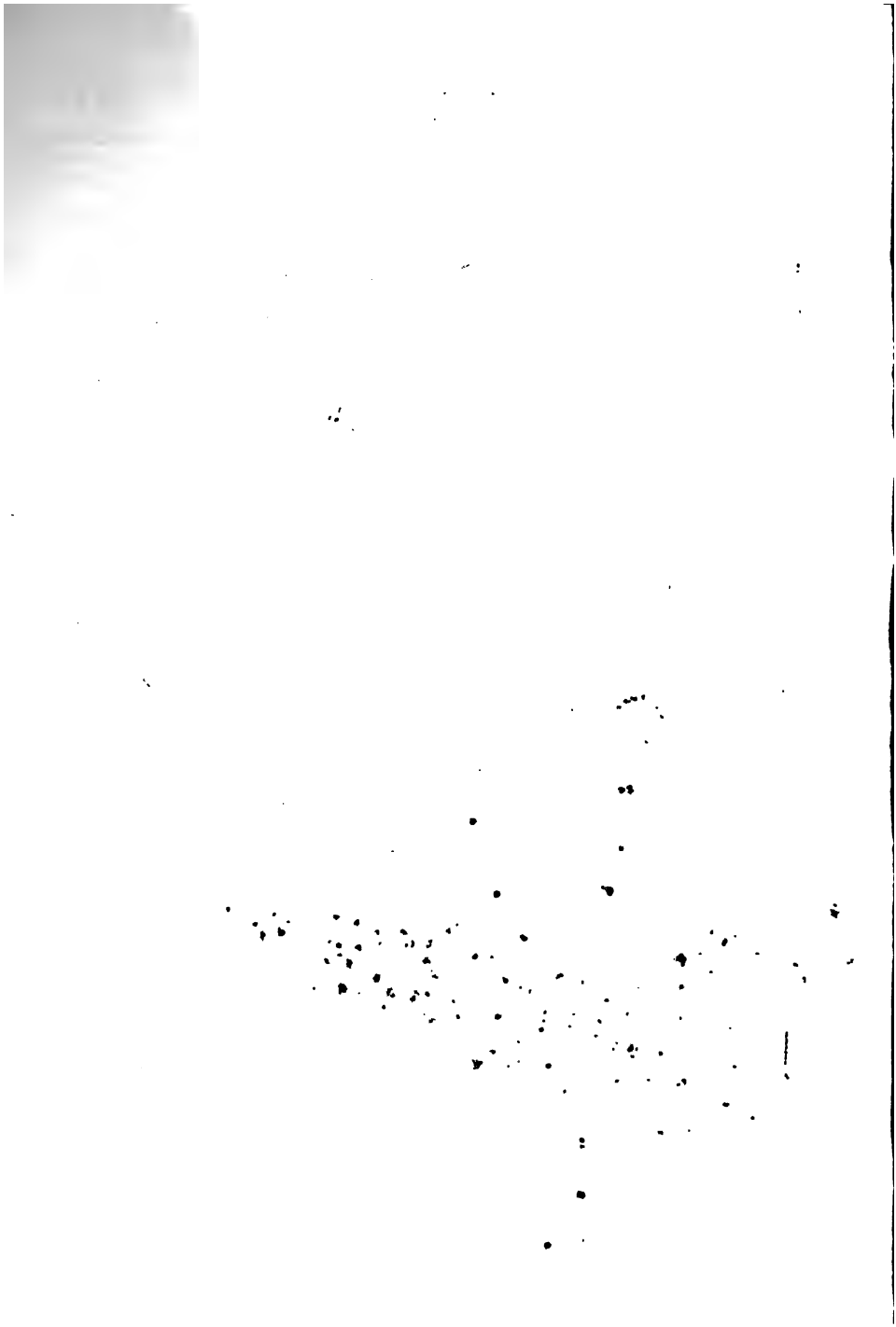

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